DOCUMENT RESUME

ED 199 814	EA 013 182
TITLE	National Strategies for Curriculum Design and Development. Report of a High-Level Personnel Study and Seminar on Design of Curricula (Australia, September 10-22, 1979).
INSTITUTION	United Nations Educational, Scientific, and Cultural Organization, Bangkok (Thailand). Regional Office for Education in Asia and Oceania.
PUB DATE	80
NOTE	87p.: APEID (Asian Programme of Educational Innovation for Development) Regional Seminar on National Strategies for Curriculum Design and Development (Canberra and Sydney, Australia, September 10-21, 1979).
AVAILABLE FROM	UNIPUB, P.O. Box 433, Murray Hill Station, New York, NY 10016.
EDRS PRICE	MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS	Change Strategies; Curriculum Design; *Curriculum Development; Developing Nations; Educational Planning; *Educational Policy; Foreign Countries; National Programs; *Public Policy
IDENTIFIERS	Asia; Australia

ABSTRACT

In September 1979, representatives of 14 of the 20 member nations of the Asian Programme of Educational Innovation for Development met in Australia to discuss national strategies for curriculum design and development. This report on that conference begins with summaries of the position papers filed by the representatives from the Democratic Republic of Afghanistan, Australia, India, Indonesia, Japan, the Republic of Korea, Malaysia, Nepal, Pakistan, Papua New Guinea, the Philippines, Singapore, Sri Lanka, and Thailand. A description of the Australian educational institutions visited by conference participants, including national agencies involved in curriculum development, state-level agencies, teachers' centers, colleges of advanced education, and elementary and secondary schools, follows. The report then presents three basic themes discussed at the conference: the planning and organization of curriculum development for present and future needs (including relationships between national agencies and agencies at other levels, and strategies for translating national goals into school curricula); strategies for curriculum development (including material production, dissemination, and evaluation strategies); and teaching and curriculum development (including selection and training of curriculum developers, obtaining teacher involvement in curriculum development and implementation, and development of supportive organizations within schools). A conference summary, recommendations, and appendixes conclude the report. (PGD)

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APEID Regional Seminar on National Strategies
for Curriculum Design and Development,
Canberra and Sydney, 10-21 September 1979.
*National strategies for curriculum design
and development; report.* Bangkok, Unesco, 1980.
78 p. (Asian Programme of Educational Innovation for Development)

1. CURRICULUM DEVELOPMENT - ASIA. 2. EDUCATIONAL INNOVATIONS - ASIA. I. Unesco. Regional Office for Education in Asia and Oceania, Bangkok. II. Title. III. Series.

375.1 ○

APEID ASIAN PROGRAMME OF EDUCATIONAL INNOVATION FOR DEVELOPMENT

National strategies for curriculum design and development

Report of a High-level Personnel Study and Seminar on Design of Curricula, Australia, 10-22 September 1979

UNESCO REGIONAL OFFICE FOR EDUCATION IN ASIA AND OCEANIA
Bangkok
1980

DEC 4 1980

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Published by the
Unesco Regional Office for Education in Asia and Oceania
P.O. Box 1425, Bangkok G.P.O., Bangkok, Thailand

Printed in Thailand

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BKA/80/RHM/512-1200

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Convened by Unesco, this Regional Seminar was jointly organized by the Curriculum Development Centre, Canberra, an Associated Centre of APEID, and the Asian Centre of Educational Innovation for Development (ACEID) with the co-operation of the Australian National Commission for Unesco.

INTRODUCTION

Background

Curriculum development is one of the areas of innovation included in the work plans of the Asian Programme of Educational Innovation for Development (APEID) for its second-cycle period. Since the inception of APEID, three High-Level Personnel Exchange Workshops had been organized during 1975-1977, which enabled,at a sub-regional level, the Heads of Curriculum Development Centres in the participating Member States to deliberate on their experiences of the curriculum activities in their countries and identify common problems and issues, and possible ways and means of dealing with the problems.

At the Fifth Regional Consultation Meeting on APEID held by Unesco in Bangkok in March 1978, 'Curriculum for Development' was one of the five major concerns of the meeting. From the discussions of this meeting and the deliberations of the three High-Level Personnel Exchange Workshops, it appeared that there are divergences of opinion about the general mode of approach to curriculum development which might be resorted to by national-level agencies.

Considering the above, the Curriculum Development Centre of Australia, an Associated Centre of APEID, jointly with the Asian Centre of Educational Innovation for Development (ACEID), Unesco, Bangkok, and in co-operation with the Australian National Commission for Unesco, planned and organized the present High-Level Personnel Project study and seminar on Design of Curricula.

The seminar was held from 10-21 September 1979 in three phases. The first phase,from 10-11 September,was devoted to visits to centres and schools in two groups, one in the Perth area and the other in the Melbourne area, to enable the participants to make an on-the-spot study of these programmes. The seminar then met from 12-18 September at Brassey House, Canberra. This phase also provided the participants with an opportunity to visit a number of institutions and organizations involved in innovative educational programmes. The seminar then moved to Sydney for the final phase of its deliberations from 19-21 September.

Objectives

The purpose of the seminar was to provide an opportunity to the Directors/senior staff members who are responsible for designing and introducing curriculum innovation to meet together primarily for exchanging experiences and exploring problems and issues of common interest; and secondly, to visit and study selected curriculum projects of the host country, thus fostering closer professional links between Australian educators and the visitors.

More specifically, the objectives of the seminar were to:

i) Exchange national experiences in curriculum design and development;
ii) Discuss curriculum design and development problems of common concern;
iii) Reflect on and assess the underlying rationales and strategies of curriculum change;
iv) Consider current and future needs for national-level curriculum development;
v) Discuss the general strategies and models of curriculum design and development which are available; and
vi) Suggest follow-up activities in order to foster collaboration among the APEID participating Member States in the area of curriculum development.

Participation

The seminar was attended by participants and observers from the Democratic Republic of Afghanistan, Australia, India, Indonesia, Japan, Republic of Korea, Malaysia, Nepal, Pakistan, Papua New Guinea, Philippines, Singapore, Sri Lanka and Thailand. Unesco headquarters was represented by Mr. G. Vaideanu, Chief, Section of Structures and Content of Education, and ACEID by Dr. M.C. Pant, Science Education Specialist. The list of the participants and observers is in Annex I.

Inauguration

The seminar was inaugurated by Dr. M. Skilbeck, Director, Curriculum Development Centre, Australia, on 12 September 1979, at Brassey House, Canberra. Welcoming the participants and observers, he explained the objectives of the seminar, the various arrangements made, and the proposed schedule of work, and expressed the hope that with the rich experience of the participants, the seminar would achieve its objectives.

On behalf of Unesco/ACEID, Dr. M.C. Pant expressed his thanks to the Curriculum Development Centre (Australia) for kindly agreeing to host the seminar jointly with ACEID, and to the Australian National Commission for Unesco for its co-operation and for providing the financial support for the internal cost of the activity. He also thanked the participants for accepting Unesco's invitation to come and attend the activity. He then briefly explained the long-range goals of APEID and some of the important activities in the area of curriculum development which have preceded this activity, and whose outcomes have been embodied in various APEID publications.

Ms. M. Gallagher, Australian National Commission for Unesco, associating herself with the remarks of the two previous speakers, welcomed the participants to this seminar, the first to be hosted by an APEID centre in Australia, and expressed the hope that the visit would provide the participants with a useful view of Australian education programmes.

Officers of the seminar

In the first plenary session, the seminar elected the following as its officers:

Chairman : Dr. M. Skilbeck (Australia)
Vice-Chairman : Dr. Yung Dug Lee (Republic of Korea)
Rapporteurs : Dr. Shib K. Mitra (India)
: Prof. P.J. Fensham (Australia)

The foregoing, together with Dr. C. Hughes and Dr. M.C. Pant, constituted the steering committee. For the group work, the following were elected by the groups as Chairmen and Rapporteurs:

Group A

Chairman : Mr. R.B. Thapa (Nepal)
Rapporteur : Prof. P.J. Fensham (Australia)

Group B

Chairman : Dr. Shib K. Mitra (India)
Rapporteur : Miss Asiah binti Abu Samah (Malaysia)

Group C

Chairman : Mr. G. Mendis (Sri Lanka)
Rapporteur : Mrs. Lee Sow Ling (Singapore)

Miss Marguerite Wells acted as the Assistant Rapporteur and Secretary of the seminar. The seminar support staff was provided by the Curriculum Development Centre and the Australian National Commission for Unesco.

Method of work

In the first plenary session, after the election of the officers, the seminar considered the provisional schedule of work and approved it with modifications. The remaining part of this session and the following two plenary sessions were devoted to the presentation of institution position papers and discussions thereon. Two sessions were then devoted to visits to institutions in Canberra. A plenary session then discussed these visits and visits made to institutions in Perth and Melbourne by participants *en route* to Canberra. At this session, a panel of Australian educators answered questions put by other participants and several crucial themes were identified for further analysis during the seminar.

The Steering Committee then held an evaning meeting and drew up three groups of themes based on the work of the first three days of the seminar. These themes were issues and matters of concern which had arisen consistently during discussion of the country presentations and the visits programme. These themes were adopted in a plenary session. The seminar divided itself into three groups, and three sessions were devoted to group work for analysis of the seven selected themes. The first drafts of the group reports were considered in a plenary session and suggestions were made for modifications.

The seminar then moved to Sydney and had a group session for finalization of its report in the light of the comments of the plenary meeting.

In the last plenary session, the Chairman presented the draft report of the seminar which was adopted with modifications. The seminar also recommended that as the country papers contain some very useful information, these should be printed by ACEID/Unesco in extenso, after necessary editing by the Curriculum Development Centre.

Members of the Pacific Circle Project had been invited to attend the last two days of the seminar as observers. All members took up this invitation and arrived in Sydney in time to attend the last two sessions. At the penultimate sessions they joined in the group discussions. In the final session, after the adoption of the draft report by the APEID participants, a person from each institution in the Pacific Circle Project provided a brief overview of its work. The meeting also allowed considerable time for informal discussions and exchange of ideas between the two groups. Personal contacts and discussion led to suggestions for exchange of materials, ideas and possibly personnel.

Part I

CURRICULUM DEVELOPMENT IN APEID COUNTRIES
(Summaries of country position papers)

The Democratic Republic of Afghanistan (DRA)

The system of education and the curriculum in the Democratic Republic of Afghanistan are centralized and the State administers, organizes and guides all the education in the country. Since the Saur Revolution of 27 April 1978, the government has initiated many new developments in education, such as:

- The new five-year educational plan based on stated aims of education and the need of the country for free, universal and compulsory primary and secondary education as well as higher education;
- Education in their mother tongue for all children;
- Modernization of the system of education;
- Preparing new curriculum based on educational aims;
- Attention to women's education and adult literacy;
- Providing new textbooks and teachers' guides in six different languages for primary schools and in-service teacher training.

The Department of Publications is a department of the Ministry of Education and has responsibility for accomplishing educational aims and preparing textbooks. The Department is also producing the curricula, syllabi and textbooks, and teachers' guides for primary and secondary schools and for those taking part in in-service teacher training workshops. The aim is to develop new textbooks and teachers' guides based on the present and future needs of the country.

The new textbooks and teachers' guides for the first and fifth grades are written by specialists and an objectives model of curriculum development is used. Each lesson plan has objectives, activities for pupils, extra information for teachers on teaching approaches and strategies, and homework. The new books are evaluated by well-trained and qualified primary and secondary school teachers before publication. All textbooks and teachers' guides for the first grade are prepared in six languages,but fifth grade books have so far been prepared only in two languages, Dari and Pashtu.

The success of any innovation connected with new curriculum, textbooks and teachers' guide materials will depend not only on how well the materials are written, but on how effectively they are used by teachers in the classroom.

From this point of view, in-service training workshops are conducted by the Ministry of Education to introduce the new textbooks and teachers' guides to teachers. Selected teachers of the first and fifth grades are given a seminar for one month to ensure that they understand the new curricula as well as how to use effectively the new textbooks and teachers' guides. Those teachers then go back to conduct seminars for other teachers in their region. Resource teachers in each subject visit schools to help teachers use the new books effectively.

The government of the DRA is introducing new curricula to modernize its schools;but there are major problems. Particular problems inherited from previous governments include:

a) A lack of basic educational provision such as buildings, resources, educational equipment and facilities and trained teachers;
b) Textbooks which were written in only two languages, Dari and Pashtu. Languages of all other nationalities were completely ignored in schools and other educational institutions;
c) The low proportion of girls in high schools and the need to provide education suitable for girls;
d) Women's and adult education and non-formal education were completely ignored; and
e) Nearly 90% of the people were illiterate.

At present there are many different departments under the Ministry of Education which deal with curriculum development materials, textbook production, research and evaluation of developed materials, revision of textbooks, etc.

For the purpose of avoiding duplication, the Ministry of Education has decided to have one institution to undertake all these activities. This new centre will have the responsibility for work in curriculum development, educational psychology, teaching methods, textbook production, research and evaluation of newly developed materials, workshops for in-service teachers, audio-visual aids for schools and revision of textbooks.

Australia

In the Australian federal system of government, the maintenance and conduct of public schools is the responsibility of State Governments. Decisions on the nature of the curriculum of schools, the extent to which schools have the freedom to develop their own curriculum, the methods of student assessment and the level and kind of support structures for curriculum development are taken at the State level and vary considerably from State to State. Any Federal educational agency therefore has to work co-operatively with State, Catholic and other independent schools and systems.

The Curriculum Development Centre is a national body which was established by Act of Parliament in 1975 to develop school curricula and school educational materials. Its tasks include research, development, evaluation and publication of materials, and the collection and dissemination of information about curricula, educational materials and curriculum development theories and processes. It is a co-ordinating body, working with school systems and other educational bodies in the States on co-operative programmes of work. The Council, which determines the policy of the Centre, is composed of people from a range of educational institutions and organizations such as school systems and tertiary institutions, parent groups and teachers' unions.

Amongst the major current issues in curriculum in Australia are the responsiveness of schools to the multicultural nature of Australian society, to changing social and economic conditions, and the definition and maintenance of educational standards. Questions which have to be addressed include the following:

- How much freedom should be given to schools to develop their own curricula?
- Is there a core of common learning experiences which are essential for all children? If so, what are these experiences and who should define them? What provision should be made for teaching English and mother tongue languages to migrant children?

With the trend to school-based curriculum development, questions arise as to what are the functions and roles of the Federal and State curriculum development agencies. In particular, dissemination is seen as a matter of concern to the Curriculum Development Centre. What sort of processes and networks need to be established to ensure that the ideas and materials produced by the Centre are understood and used effectively by schools? The research, development and diffusion model of curriculum development and the philosophy of education underlying it are being challenged and analysed. Thus the Centre must concurrently both foster and strengthen current dissemination practices and bring under critical scrutiny the curriculum designs and models which treat dissemination as a culminating stage of the development and diffusion model which is no longer adequate either as concept or in practice. Thus a major task for the Centre is addressing the nature of educational change processes and seeking the most effective ways of implementing in schools the curriculum changes which Australian society most needs.

India

In India, education is a joint responsibility between the Centre and the States. The National Council of Educational Research and Training in New Delhi plays a key role in this context, as a Centre for curriculum development, through the involvement of State-level educators and specialists at various levels through committees, seminars and conferences.

Curriculum development, since the Education Commission of 1964-1966 submitted its report to the Government of India, has taken place through a wide-ranging participation of people at all levels. The philosophy of curriculum development follows, broadly, the main features of the Gandhian system of basic education, particularly its emphasis on learning through socially useful productive work and bridging the gap between the school and the community.

Curriculum development in India is concerned with four important aspects, viz.:

1) Ever since western education was introduced in India in the nineteenth century, there has been discontinuity in the history of education in India,and attempts are being made to recover Indian identity through a linkage with tradition;
2) Modernization of curriculum is necessary in order to link education to productivity and to development;
3) Curriculum has to be work-centred, but traditional attitudes to manual labour stand in the way; and lastly,
4) A value orientation in keeping with the development of a secular democratic state is necessary.

Contemporary issues in curriculum development in India are (1) whether, in order to make curriculum relevant to the diversities of the Indian social groups, curriculum should not be decentralized; (2) whether, in view of rural-urban differences and in view of the importance of developing a unity in diversity, a common core curriculum should not be developed, allowing additional units to be developed locally according to the needs and aspirations of the people; (3) in order to modernize curriculum and decentralize its development,it is necessary to improve the competence of teachers through pre-service and in-service education, but in view of the large numbers involved, whether distance learning systems should not receive higher priority over the traditional methods.

During the course of discussion, it was pointed out that a minimum learning core for the primary schools was being developed by the NCERT,and this is based on competences to be achieved, including those in the affective and psychomotor domain, rather than subject or discipline-wise cognitive objectives. It was also pointed out that there is scepticism in rural areas about the value of a middle-class urban-oriented formal curriculum, accompanied by a doubt about the validity of the school teacher imparting instruction in agriculture-based work, because the villagers who are also farmers, carpenters, masons, etc.,know the work better. Political interference is reduced by having all Education Ministers as members of the Council of the NCERT.

Indonesia

The Centre for Curriculum Development of the BP3K was established in 1969. It is the agency at the national level which has the responsibility of organizing and co-ordinating activities dealing with the development of the curriculum, and supervising units of curriculum planning and development within the Ministry of Education and Culture. The Centre undertakes the various stages of curriculum development, starting with identification and formulation of educational objectives and ending with basic course outlines. Tyler's model has influenced the approach to curriculum development in Indonesia,and centralized curriculum development is accepted.

Although curriculum development in Indonesia is centralized, the actual process of development involves various kinds and levels of people, especially those in the educational system, in planning and development.

The underlying philosophy of education in Indonesia is Pancasila which, when used in curriculum development, makes basic assumptions about the critical role which the school plays in developing nations in influencing the development and growth of the younger generation. While it is recognized that the school is only one of the many educational and social environments that influence and shape the young generation, it is also recognized that the school is the most potent, strategic and effective institution for bringing about social change in developing nations.

The curriculum developed at the central level is followed by all schools in the nation in terms of basic objectives and content. Variation is allowed only in terms of translating the same objectives and content into instructional programmes. This is because it is believed that all individuals,whether rural or urban, should develop the same competencies which modernization requires.

There is a problem of quality in a mass education system,and various education techniques are used to assess curriculum outcomes.

The Development School Pilot Project, started in 1973, is a long-term research and development activity to develop a curriculum system which can achieve the goal of quality education for the masses. In this project, various innovations such as mastery learning strategies, modular instructional systems and activity-based learning materials are introduced into a group of schools and evaluated.

Japan

As part of post-war reconstruction, the education system was reformed and today Japanese education is remarkable for the number of bodies involved in research, surveys and in-service training - as many as 960 at present. The National Institute for Educational

Research (NIER), established in 1949, is an independent institution under the jurisdiction of the Ministry of Education and aims to conduct high-standard, practice-oriented research using scientific methods. Four other national institutes are engaged in educational research: the National Institute for Special Education, the National Training Institute for Social Education, the National Centre for University Entrance Examinations and the Development Centre for Broadcasting Education. Local educational research bodies contribute greatly, jointly with school authorities and teachers, to the enhancement of educational standards. Also 200 prefectural and municipal research institutions form the National Federation of Educational Research Institutes of Japan. With the NIER at its core, the Federation conducts joint research, and exchange and dissemination of outcomes.

There has been a close relationship between research projects of NIER and the history of education and shifts in educational policy; though research cannot be expected to have immediate direct effects on policy,it does have a marked, if indirect, influence. NIER's Board of Counsellors represents educational, academic and business circles, and advises the Director-General. Of a full-time staff of 103, 79 are research staff. Funding is from the budget of the Ministry of Education. Most NIER projects are directly or indirectly concerned with curriculum development at a national or international level.

In-service training is sponsored jointly or independently by the Ministry and Boards of Education or by the teachers, depending on the nature of the programme. Most programmes are large-scale, as is voluntary research by teachers. Publishers must submit draft manuscripts of elementary and secondary school textbooks to the Ministry of Education for authorization by textbook inspectors. In the Ministry, subject specialists assess, review and examine curriculum development strategies being adopted. School advisers at local or district Boards of Education also perform this function. They visit schools as occasion demands, to advise teachers or consult with principals about school management. The school curriculum appears to be uniform, inflexible and lacking scope for creativity,but curricula are developed by schools and teachers and in fact the process is far from uniform.

Major areas of curriculum development are now: education for individual character development; education for Japanese children abroad and after returning from abroad; and education building closer contact with the people of Asia and Oceania. Special stress in the future will be on international understanding and co-operation as a basis for school and life-long education. Technological forecasts for Japan emphasize the importance of co-operation with Asia and Oceania on matters such as food resources, energy, communications and ocean development.

In future,new teaching-learning materials and new scholastic structures for more open educational systems must be devised. Computer-assisted instruction and diagnosis of aptitudes, and information systems based on TV,will be increasingly important.

Republic of Korea

Responsibility for school curricula and curriculum development is divided between the Korean Educational Development Institute (KEDI) and the Ministry of Education. The latter has the tasks of overall planning and co-ordination. KEDI is responsible for the designing and development of curricula and textbooks and basic research related to curriculum development.

There is one common curriculum for all schools in the country. The major source of educational goals is the Charter of National Education. Education is seen as a means of accelerating national development by serving the nation's political, economic and social needs and for promoting the realization of the aim of an industrialized, free and democratic society in which every individual is guaranteed a higher quality of life.

KEDI's approach to curriculum development is research based. The curriculum is revised every six years. The educational goals are translated into curricular objectives for each grade and area of learning. Syllabuses are developed and textbooks and instructional materials written and tried out in schools. The curriculum and materials are then revised, approved by the Ministry of Education, and printed for use in schools. Evaluation is built in at each stage and opinions are sought from subject experts, teachers and the public.

Since there is only one standard curriculum in the nation, there is no provision for alternative curricula to meet the unique needs of local communities and the varying interests and abilities of pupils. At the present time, little freedom is given to teachers to develop their own curriculum,and this may need to be improved as teachers become better qualified.

The question of what should be taught and the problem of maintaining a balance between knowledge and higher mental processes, between national needs and individual needs, and between cognitive and affective learning are matters of concern.

Decision-making about school curricula needs to be based on sound data. At the present time, judgements are made more on feelings and intentions than objective information. There is also a need to build into curriculum development mechanisms for wider participation of people representing various disciplines as well as teachers, in setting up of major goals and objectives. The consequences of curriculum decisions are so far-reaching that they cannot be left to any single professional group.

There is difficulty in ensuring that desired curricular outcomes are achieved. Relating teacher education to new curriculum development efforts is crucial to the success of curriculum programmes. Pre-service and in-service education are seen as integral parts of curriculum development.

Integrated curricula are being developed for first and second grades and the effectiveness of this work is being evaluated.

There is also concern with the 'hidden' or 'latent' curriculum and the effect on student outcomes. In-school activities are not the only influences on children's learning, and links are made between out-of-school activities and classroom teaching by including relevant principles and methods in the teachers' guides, in order to ensure that the hidden curriculum becomes conducive to achieving the curriculum objectives.

Malaysia

As a developing country composed of multicultural communities, Malaysia is concerned that education should contribute to national unity and the expansion of the economy. Under the Education Ordinance of 1957, Malaysian-oriented syllabuses common to all schools, with Malay, the national language, as a basic component were introduced, and a place in school assured for every primary school-age child. The gradual implementation of Bahasa Malaysia as the main medium of instruction, with English as a second language, was started in 1970 as a means of achieving the national goal of unity.

Until the mid sixties, curriculum was determined by ad hoc committees, which circulated syllabus drafts to schools for comments, trialled the redraft, and amended it on the basis of the trials. The final product became the common syllabus for all schools.

Subsequently, the Ministry of Education recognized the need for major curriculum reconstruction in terms of objectives, content and teaching methods. In 1971 a study team proposed the establishment of the Curriculum Development Centre (CDC) which was set up in 1973.

The CDC is at present responsible for more than 30 curriculum development projects, aimed at improving the quality of school education, bearing in mind the national goals of unity and socio-economic development. The CDC takes essentially the centre-periphery approach, but teachers and other relevant agencies and bodies within and outside the Ministry are also involved in the process. The CDC does subscribe to the objectives model,but does not tie itself rigidly to any theoretical curriculum design or model, preferring to adapt models in order to accommodate the needs of a developing country.

The CDC has five main programme areas: language curriculum, primary curriculum, secondary curriculum, research and evaluation, and training and dissemination. Projects are classified broadly according to their stage and development: experimental stage, implementation stage, review/revision stage.

Translating national goals to curriculum specifications involves developing a common curriculum to encourage unity while reflecting and preserving cultural diversity, and equalizing opportunity between areas, groups and individuals, including the culturally disadvantaged. In doing this, the CDC is faced with two major concerns:

i) How to anticipate future societal needs in order to avoid pupils becoming "walking encyclopaedias" of outdated information;
ii) How to keep the balance between tested traditional value systems and emergent new needs.

For the successful implementation of curriculum change, teachers need reorientation and retraining, but this is usually difficult due to varied teacher competencies and the need to implement curriculum changes speedily throughout the whole country. Also the examination orientation of teachers leads to neglect of non-examinable areas and of inquiry-discovery, problem-solving methods. The community shares this exam-orientation, but also expects the school to equip the children for living.

In Malaysia's centralized system, many teachers need support and guidance in interpretation and translation of the common programme into workable and meaningful classroom practice.

A number of strategies aimed at wider participation in the curriculum process have been tried, although a totally school-based strategy is not likely or desirable because unity, equality and maximum utilization of resources are ensured by centralization. To help promote more effective implementation and regional participation, educational resource centres are to be established to provide technical and professional support and foster exchange of ideas between teachers, leading to a greater utilization of local resources. It is also proposed to increase professional staff at the State level to strengthen professional advisory and guidance services to teachers.

Nepal

The antecedents of education in Nepal date back many centuries to an indigenous system of training. In recent times, when modern systems of education were developing in most of the countries of the world, time stood almost still in Nepal. Only a few decades ago, in the year 1952, a comprehensive education plan was conceived and introduced by parts. New schools were established and the level of literacy rose slowly. The rapid and unpurposive growth of schools brought many problems leading to alienation of education from the country's socio-economic realities. This again compelled the nation to bring forward a National Education System Plan in the year 1970.

The New Education Plan regards education as an investment in human resources for the development of the country and is primarily aimed at counter-acting the elitist bias of the inherited system of education by linking it more effectively to productive enterprises and egalitarian principles. The plan calls for unifying education into one productive system that serves the country's needs and aspirations.

With the introduction of the New Education Plan, a Curriculum Development Centre has been established because of the felt need for an agency that would work solely towards developing, implementing and evaluating the curriculum, and creating an in-built process of accreditation and improvement.

Currently an objective-based and centrally-directed model of curriculum development is practised. National goals are translated into curriculum objectives and programmes. Curriculum guides are prepared in various subject areas. The committee system is used to develop curricula in order to make the best use of scarce subject specialists and curriculum developers. Draft syllabuses are sent to schools selected on the basis of geographical representation for their reactions. Their comments and modifications are taken into account when the syllabuses are rewritten by specialists. In-service training programmes are organized for teachers, headmasters and supervisors in various regions.

At present about 85% of children at the primary school stage (ages 6 to 8) are enrolled in grades 1 to 3 and receive a basic course of instruction in reading, writing and numeracy. An attempt towards an integrated curriculum is being developed and tried out so that one textbook at each grade level will cover the whole of primary education. In grades 4 to 7 the curriculum is oriented to work experience and good citizenry. At the secondary stage emphasis has been given to vocational education and at the lower level the syllabus is directed towards producing skilled manpower.

The problems of schools and curriculum development are related to lack of human and economic resources in the country, the diversity of cultures and languages, and the mountainous terrain which makes transport and communication extremely difficult. The majority of the teachers at the primary level are untrained and there is a lack of trained subject specialists for curriculum development. Also the high cost of instructional materials which have to be imported from abroad makes the provision of basic curriculum materials very expensive. Despite all these problems and difficulties, it is considered that the curriculum should be revised every five to seven years.

While the literacy of boys has improved markedly since 1971, the education of girls still remains a problem. Various incentive measures are being adopted to bring more girls to the schools in the coming years.

Pakistan

Islam provides for a complete code of life. The Holy Quran, Revealed Book through the last prophet (Muhammad,may Allah's peace be upon him), covers even basic thinking constructs for various studies such as social studies, science, mathematics. It is thus the basis of the philosophy for education in Pakistan.

The National Bureau of Curriculum and Textbooks (NBCT) was set up in 1967 as part of the Ministry of Education to reflect the ideology of Islam, enhance national cohesion and design curricula for social and economic needs. Until the sixties education was a provincial responsibility, but the NBCT has now assumed a federal advisory and co-ordinating role. All matters relating to curriculum development, textbook production, evaluation and teacher orientation come under the NBCT's purview. The four Provincial Bureaux of Curriculum and Textbooks are administratively independent and responsible to the provinces,but guidelines are prepared at national level in such a way as to be acceptable to each curriculum centre. Steering committees guide the implementation of programmes, with responsibility for initial drafts and microtesting resting with the Provincial Bureaux. This ensures grass-roots involvement. Varying organizational structures in the four Bureaux give an opportunity to study strengths and weaknesses of different organizational designs. Many other bodies and persons take part in curriculum development at the provincial and national levels. In the National Bureau, a network of committees of experts coordinates this participation and ensures a meaningful and realistic curriculum design.

The current education policy (1978-83) enjoins the NBCT to ensure curriculum and textbook development in conformity with the ideology of Islam and national objectives. These are abiding loyalty to Islam and Pakistan, awareness of global Muslim unity, pride in Pakistan's heritage, development of Muslim character, equal education opportunities, individual development, functional literacy for national development, love of learning and promotion of scientific training for national development. Implementation strategies include revision of curricula around Islamic thought, fusion of the traditional and modern school systems, attuning of facilities and programmes to economic needs, encouragement of lifelong education, raising of productivity by vocational education for workers, mobilization of community resources to achieve universal functional literacy, community participation in facilities development, linkage of technological training to production and utilization of existing institutions to achieve maximum results with minimum outlay.

Curriculum policy aims at qualitative improvement by revision of all curricula and textbooks for accuracy, academic standard, availability and Islamic content. Integrated curricula and textbooks with stress on practical and creative work are being introduced into some primary schools and reviewed for possible common introduction. Microstudies and evaluation of curricula and objectives are in progress.

Goals and aims of education have been delineated by committees of experts, administrators and teachers, and comments sought from various agencies. Relationships with various bodies engaged in similar work are complex but co-operative and cordial. Through APEID,relationships are maintained with overseas agencies. Activities are also carried out under various bilateral educational and cultural agreements.

There are communication problems between policy-makers and developers and between developers and implementors. Changes aimed at are often too radical for those who have to implement them. Broad representation in decision-making raises the problem of synthesizing different points of view.

Provision of support services is a second problem. Finance and co-ordination are difficult. The cost of paper, for instance, is a formidable problem. In-service training needs to be decentralized to within cycling distances for teachers.

Evaluation and feedback are ensured but need to be institutionalized to ensure continuous and effective liaison.

The following future action is needed: felt needs of the people should be established, formulation of objectives should precede development, introduction of microtesting streamlined by use of 'pilot projects', co-ordination between various bodies streamlined, teacher training systematized, materials developed, tested and mass distribution accompanied by reorientation of teachers.

Papua New Guinea (PNG)

Papua New Guinea commemorated its fourth national day on 16 September 1979. In the four years of its political independence, it has gone through a lot of rapid changes politically, socially and economically.

The present government's decision to decentralize the government system through the introduction of provincial governments was implemented in January 1978. For the PNG education system, decentralization of the government system meant decentralization of some aspects of curriculum decision-making to the provinces. However, in the area of curriculum,rather tight centralized control has traditionally been exercised.

The establishment of the Curriculum Unit at the end of 1974 took place on the eve of independence and coincided with the publication of the Five-Year Education Plan (FYEP) (1976-1980) designed to render the education system more relevant to the needs of the people. The concepts of community education stipulated in the 1976-1980 FYEP for community (primary) school level imposed, by implication, a need to decentralize some elements of the curriculum to bring it into line with the needs of the 19 provinces and a multiplicity of diverse communities within each.

For several years, as a new community schools curriculum was prepared, the community education ethos remained little more than a pious hope in the absence of political decentralization. However, with the introduction of a provincial government system, considerable pressure began to be exerted on the national government to indicate just what powers provinces did have with respect to the content of schooling. Presently the matter has not been resolved to anyone's complete satisfaction.

Before the end of 1979, Parliament will have enacted a law which will delineate national headquarters and provincial roles in primary level curriculum. In doing this, it is intended that the main role of the subject specialists (Senior Curriculum Officers) will be to co-ordinate the activities of others, such as teachers, inspectors, Teachers' College staff and University personnel, who will be used as much as possible to prepare syllabuses and support materials in the various subject areas.

'Community school' for PNG means the school's teaching and learning is related to the community and its activities. This means its curriculum begins with the activities of the local community and leads to the national community and its activities. The model for curriculum development is thus one of a centrally provided component with the second component of locally provided inputs.

The curriculum organization entails two parts - the nationally prescribed subjects and community-based subjects in the primary schools. The nationally prescribed subjects are a basic education akin to a core curriculum consisting of English, mathematics and science. The community-based subjects include community life, expressive arts, health and physical education for which syllabuses are provided.

Orientation toward community education required rethinking of the secondary curriculum as well. It must reflect the needs and values of PNG. It must take account of the increasing number of secondary students forced out of the system after Grade 8 (Form 2) and for whom employment chances are rapidly disappearing. It must at the same time continue to prepare others for employment and for further education. For the above reasons syllabuses for all subjects in all grades from 1 to 12 have been written since the

Curriculum Unit was established. A major project at the secondary level is the attempt to critically reorganize the existing secondary syllabus so that it incorporates practical activities into learning in a way that gives them a real priority.

The objectives of primary education are:

- to develop literacy in English to a level that will help facilitate the communication skills necessary for national unity and national development;
- to develop an attitude of mind that will enable school leavers to participate in rural life in a constructive and fulfilling way;
- to develop knowledge and skills that will enable students to continue with their further formal education.

At the secondary level similar aims pertain. In addition, secondary schools aim to develop knowledge and skills that will enable students to engage in paid employment.

Underlying all of these, of course, is the vital need to educate both for individual self-fulfilment and for national development. One common element in all schooling will be to ensure that those thinking and adaptive skills required to facilitate self-improvement and an ability to adjust to a rapidly changing environment are adequately developed.

Philippines

Curriculum development in the Philippines has been very active throughout the 1970s following a number of policy decisions early in the decade. It is formally organized with a diversity of centres including separate centres for work in science education, in language education and in social studies as well as other bodies responsible for elementary education and secondary education. The National Educational Testing Center provides evaluative information and feedback on curriculum outcomes.

Parallelling this diverse organization, these centres have also been encouraged to have diversity of function so that they approach the curriculum tasks in quite different ways. Some have research bodies, like NETC and the Educational Development Projects Implementing Task Force, whose research findings have real potential for implementation in curriculum development.

The curriculum development work of these various centres is coordinated by the National Board of Education - the final decision-maker concerning curriculum policy.

The rationale for curriculum development in the Philippines is based on a number of beliefs that come together in the following statement. National education aims to provide a broad general education that will assist each individual, in the particular ecology of his own society, to attain his or her potential as a human being; to enhance the range and quality of individual and group participation in the basic foundation of his development; to provide equal educational opportunities; to develop to a high level professions that will provide leadership for the nation; to advance knowledge through research and apply new knowledge for improving the quality of human life, and respond effectively to changing needs and conditions of the nation through a system of educational planning and evaluation.

A number of problem areas have now been identified and the attention of the various centres is now being directed to these.

One is the problem of translating the very generalized objectives associated with the rationale into objectives that can be operationally useful in curriculum development.

Another problem is associated with the need to reorganize and cater for regional options within the curriculum. The concept of learning needs is a useful one in this respect,and widely representative groups, including people outside of formal education, are assisting with the task of defining these needs in more local terms to which curriculum development will be asked to respond.

One of the research projects has come up with the challenging results that students who drop out of education after only elementary schooling have only about two-thirds of the intended attainment at that level, but some of these have been found to actually progress, outside the school system in terms of some competencies, considerably beyond the level of schooling at which they ceased. This sort of finding raises some quite fundamental questions about the relationship between formal and non-formal education, and about the merits of extending or reducing the length of basic education.

With the recent changes in the administration, it seems likely that the need to respond to these new challenges for curriculum development will be intensified.

Singapore

Singapore became self-governing in 1959, and independent in 1965. It has four official languages, English, Mandarin, Malay and Tamil, and a population of 2.4 million of whom 75% are Chinese, 15% Malays, 7% Indians and 3% other minorities. There are 370 primary and 120 secondary schools, and seven Junior Colleges. The school system is basically a 6-4-2 system,but changes are currently being made to allow students to stay longer at any stage if they need to. Bilingualism is an important element of educational policy,and all students learn two of the official languages, which in practice means English and the mother tongue. Students are expected to attain bilingual competence to the extent of their capacity.

National strategies for curriculum design and development

The Education Development Division is one of the four Divisions of the Ministry of Education. It formulates syllabuses, prepares materials, advises schools, undertakes research and teacher development, prepares examination papers and disseminates Ministry curriculum information. The total staff numbers 207, of whom 170 are professional. The Schools Division provides advice on the school situation and feedback on instructional programmes. International links are maintained and co-operation with national institutions such as the Singapore Science Council and the Family Planning and Population Board is undertaken. Professional associations are involved in pilot programmes.

The system is highly centralized and prescriptive. Syllabuses are planned by advisory subject committees of subject specialists, written by professional staff of the Education Development Division, then approved by the Curriculum Development Committee, and issued to schools. Under the part-time committee system, the process of syllabus writing was slow and unwieldy. Since the expansion of the Division, the committees are now advisory committees with much of the work being undertaken by professional staff.

Supportive activities are planned by the Division and implemented with the assistance of teachers and experts. Feedback on implementation is through zone subject committees comprising senior subject teachers. Reviews are set in motion by policy change, feedback, pupil performance, obsolescence of material as part of the overall curriculum development plan. A new education system to be phased in from 1980 has set in motion a total review of curricula.

Education is used in a well-directed way as a strategy for national development, social reconstruction and development of a national identity.

One main problem area is language teaching, in particular English language teaching. Another important area receiving much current attention is social and moral education for which new curricula and materials are being planned.

At the moment curriculum materials and support are 'given' to teachers but, with the development of teacher expertise, it is hoped to have the impetus of development coming from the periphery to the centre, as well as from the centre to the periphery.

The old concept of curriculum as syllabus was too narrow, but the present concept, of everything that happens in school as 'curriculum' is so broad as to be unmanageable. Curriculum design and implementation also need to be directly related to the actual school conditions and needs.

An emerging concern is to co-ordinate the effects of the four dimensions of the curriculum: the planned curriculum, the tangible curriculum (what is really taught), the non-formal curriculum (out-of-class activities) and the hidden curriculum (resulting from covert influences and values).

Sri Lanka

Curriculum development in Sri Lanka is undertaken by a division of the Ministry of Education charged with the responsibility of curriculum development and teacher education in the country. All programmes in education have had their inspiration from the rich religious-cum-educational culture of the country dating from the third century B.C. In that tradition the processes of curriculum construction, communication to the student, evaluation of outcomes, and development of content were all closely integrated and done by the same team of 'gurus' (teachers).

Since the commencement of the Curriculum Centre in 1969, rapid strides have been evident in the formulation of syllabuses, preparation of teachers' guides, students'workbooks and the conduct of in-service teacher education classes. Some of the points to note can be listed in brief as follows:

1. The curriculum for the primary classes is child-centred and activity oriented and not formally subject-based. The integrated curriculum informally brings into being language, mathematical, scientific and other skills through the activities and learning opportunities. This programme has been in operation since 1974 and has shown good results.
2. The curriculum in the junior secondary classes (grades 6-10) was further developed from the beginning of 1979. The remarkable feature of this work was the fact that the draft content of the syllabuses, prepared by panels of teachers, teacher-educators, university lecturers and education supervisors was kept open to the public through the mass-media, non-educational state agencies and education offices and the views of the public canvassed. On the basis of the views of the parents, educationists, Members of Parliament and others, the drafts were revised and final syllabuses sent to all the schools for implementation from January 1979. This was the first time such a strategy was utilized and it proved successful.
3. The course of studies in the junior secondary level includes lessons on mental education (Yoga) in the Health and Physical Education programme. 'Appreciation of the environment', an integrated subject that deals with the study, use and protection of the environment, has been included recently.
4. Since nearly 75% of the population in Sri Lanka is from the rural areas, education for rural development has had a significant backing. The Small Schools Programmes (affecting 26% of the 9,000 state schools in the country) has been planned to consider all aspects of development of the child. The curriculum, the framework of which is prepared at the centre, has been enriched at the school level to make it child-centred and community-oriented.

The parents and community have been made active partners and shareholders of the school-company. A Parents' Charter, with a Presidential decree therein, has given all parents their rightful place and also made them aware of their duties towards education of their children.

5. Religious instruction in the religion of the child is compulsory in all schools. The major religion is Buddhism, while the other religions, Hinduism, Christianity and Islam have also been given their due place.
6. Population education, to bring about awareness of the increases and changes in population and their effect on the families and the resources and the environment, has been brought in informally in language, science, maths, social studies and health.
7. Implementation of the curriculum is done through a co-ordinated effort of the team of curriculum developers including educational administrators, master teachers, and teachers.

Thailand

In Thailand the Curriculum Development Centre is one of six divisions within the Department of Educational Techniques. It is responsible for the curriculum in all subjects except science and mathematics below the university degree level.

Throughout the 1970s there has been considerable activity which was based on a critical review and assessment of the 1960 curriculum. This was carried out by a widely representative group. There were also a number of other bases for the development of curriculum which included the Report on Educational Reform and the National Education Plan.

The CDC has developed a number of strategies for its task of preparing new curricula for the whole nation. In its attempt to accommodate regional differences within a centralized curriculum, it has tried to start with an assessment of grass-roots needs. This problem has been tackled in conjunction with the Adult Education Division (now Department of Non-Formal Education) in order to obtain a nationwide survey of problems and needs of people from all walks of life all over the country.

As it designs curriculum content and materials, these are tried out in 65 schools spread through the country, 25 of which are directly under the CDC. Regional Offices are encouraged to contribute diversity within unity. In suitable situations parents and community co-operate with the school to provide more practical aspects of the curriculum. Attempts to 'teach' parents through their children have not been successful, but parents have successfully contributed to the teaching of the practical aspects.

There is a major task in hand at the moment in planning new curricula for work or career education after basic secondary education. The government is planning to encourage this, among a population unaccustomed to the worth and importance of this type of education, by offering salary scales for students completing this education which increase according to the degree of work education courses they choose during their senior secondary schooling.

Attempts to integrate the curriculum and emphasize processes as well as content have been more successful at the primary than secondary level. In the latter, teachers tend to want to stick to disciplinary content and this preference has been reinforced by university entrance requirements. The Ministry of Education has been seeking the co-operation of the University Bureau in this matter, but change may not be possible.

As the full implementation of the new curriculum in 1981 draws near, it is clear that intensive in-service training of all the teachers is too expensive. Accordingly strategies will be based on (i) simplified material and supportive manuals; (ii) establishing approximately 1,000 exemplary schools to which teachers in the school clusters should go for observation; (iii) a regional contribution of teachers as resource persons with funds for organizing meetings and/or visiting schools in a cluster;and (iv) producing united follow-up evaluation material to assist those persons who regularly visit schools to move the emphasis of these visits towards curriculum support.

Part II

VISITS PROGRAMME

The visits programme was an integral part of the programme of the APEID seminar. The visits were intended to both provide the participants with an insight into education and curriculum development in Australia and to raise their awareness of the similarities to and differences between education in Australia and their own countries as a basis for further discussion.

A list of all the institutions and schools visited is given in Annex IV. The participants expressed their appreciation of the work that had gone into the preparation for their visits, the welcome and hospitality extended to them and the time spent by many people talking about their work and conducting tours of facilities. One person on each visit prepared short notes on the school or institution for the benefit of other participants. This section has been compiled by rearranging and selecting from those notes and thus represents the participant's view of, firstly, the school or institution and, secondly, what was of interest to the group as a whole.

1. National-level institutions

All the national agencies emphasized the importance of co-operative work between various people with responsibility for education at the national level and the need to work in conjunction with State Departments of Education and other organizations who had responsibility for the conduct of schools.

The Schools Commission has four special programmes which influence the curriculum of schools, namely, programmes for:

a. disadvantaged schools
b. special education
c. promoting community participation
d. special projects and innovations

The innovations programme was based on a system of grants which enabled schools and teachers to implement new initiatives, often curriculum changes. While innovation on this scale was seen as highly desirable and many good programmes and ideas were developed, careful consideration had to be given to any proposals for large-scale implementation of these innovations.

The Educational Research and Development Committee has four main functions:

a. funding research projects
b. commissioning research activities in four priority areas:
    i) multicultural studies
    ii) social, demographic and technological changes
    iii) recurrent education, and
    iv) classroom instructional attainment
c. conducting training on research, and
d. disseminating research reports.

The Australian Council for Educational Research (ACER) is a national organization, autonomous and independent, concerned with research and development in education. Test research and development has been a substantial component of its programmes. This work is supported by specific grants and by users of test materials and testing service programmes.

ACER did not see its testing programmes as running counter to the independence of schools as regards the school-based curriculum planning and development. ACER is currently supporting moves towards school-based decision making and assessment by developing evaluation procedures by which teachers could evaluate curriculum materials.

The work of the Curriculum Development Centre, as one of the participating institutions in the APEID meeting, was discussed throughout the conference. Participants also had opportunity to talk with staff members on core curriculum, science education, cultural and social education, research and dissemination.

The main objective of the work of the Aboriginal Education Section of the Commonwealth Department of Education is to promote better educational standards in aboriginal reserves. Encouragement is given to local personnel to develop their own curriculum suitable for their needs and situation. The chief responsibility of the Language Teaching Branch is migrant education. Syllabuses and curriculum materials for use in all States are prepared, tried out and revised with a view to obtaining the best syllabuses, curriculum materials and instructional processes. Language tests are carried out to determine the proficiency level of students so that placement and remedial work can be done for the maximum benefit of learners.

2. State-level institutions

The differences and similarities between the various approaches to curriculum development in the States were of considerable interest. The nature of curriculum guidelines, in terms of detail, level of prescription, focus, the range and use of support materials such as teachers' handbooks and students' materials, the roles of the regions and the degree of autonomy of schools were frequently the subject of discussion.

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New South Wales

At the Teachers Resources Centre, officers of the N.S.W. Department of Education spoke about the work of the Directorate of Studies and the Division of Services. The work of these two sections is complementary and both are concerned with planning and implementing changes and improvements in schools.

There is a three-tiered system of education in New South Wales. The Central Office has the responsibility for deciding priorities and directions for the school curriculum and issuing guidelines to schools. The Directorate of Studies, in consultation with curriculum committees in regions and with teachers, prepares new guidelines for primary and secondary curriculum. At the same time as the guidelines for primary and secondary curriculum. At the same time as the guidelines are issued, resource materials for students and implementation materials for teachers are also given out. The Regional Offices of Education have the responsibility of implementing guidelines from the Central Office and for establishing aspects of the curriculum which are unique to the region. Schools are mainly responsible for implementation, although they do have a chance both to participate in establishing priorities at the centre and to develop their own programmes. The guidelines (or syllabuses) used to give detailed content for each subject,but in recent years the style has changed and the guidelines are based on a concept approach.

The Division of Services is concerned with implementation of and support for curriculum change through the following services:

- Production of curriculum materials to support curriculum guidelines;
- Information and support services to school libraries such as annotated bibliographies, training of teacher librarians and advice on organizing school libraries for particular purposes;
- In-service education with an emphasis on 1) retraining for changes of level of teaching (e.g. primary to secondary), and for new curriculum areas; 2) management principles common to all schools; and 3) courses on implementing change.

In reply to a question, officers said that the move to provide only guidelines on aims, objectives and outcomes left teachers with the task of filling in the structure of the school curriculum, for example sequencing and organization of concepts and content. It was an article of faith, not based on wide experience, that producing resources for teachers would enable them to do this. Time would tell how far the teachers were able to do this work.

At the Child Migrant Centre of the N.S.W. Department of Education, the visitors were told that during the last 10-15 years there has been a growing recognition in N.S.W.,and for that matter in all the other States,that the educational programmes being offered in the schools were not very helpful for the pupils from non-English speaking background. This has led to a search for understanding of what sort of society Australia is and what sort of education will be meaningful for its future citizens. The idea of 'multiculturism' is fast evolving, and hence the need for developing 'multicultural education' policies and programmes. Policy statements have come from some States,and N.S.W. is working on a policy which is expected to be announced shortly. The main concept is that students' ethnic identity is not regarded as that of the country of origin,but as Australians who are of,say, Greek or Italian descent and takes into account the Australian experiences of various ethnic groups. It is also recognized that even if English is the mother tongue, the ethnic interests remain and need nurturing. Another concern is the national identity, as ethnic identity,can lead to divisiveness and this has implications for the relationship between the two identities, and interaction between the various ethnic identities for living in a multicultural society. The negative attitudes of the teachers, parents and community are seen as a major barrier to mutual understanding.

Currently around 80 different language teaching programmes covering either grades 4-8 or K-6 are being implemented. Another transitional bilingual programme in K-2 is in operation.

Even though 85% of children are Australian born, some 20-25% students in State schools come to school speaking a language other than English. Special English language programmes have been designed to meet the situation. One such programme for newly arrived secondary stage students is offered at 6 centres where two terms of intensive learning of basic English are offered. The students are then placed in the normal secondary schools with parallel English classes. Other programmes are in primary schools where a variety of methods are used for teaching English. However, the use of published packages or kits is not encouraged. On the other hand teachers are put through a 20-day intensive in-service training to equip them to handle these programmes.

In all the multicultural education programmes,it is recognized that English is a dominent language and ethnic cultures can be reconciled with national concerns and customs rather than attempting to assimilate them. The plurality of the Australian society is a reality,and hence all these attempts to develop the multicultural education concept.

Australian Capital Territory (A.C.T.)

The A.C.T. Schools Authority is known for its delegation of responsibility for curriculum matters to individual schools. From time to time the 15 member Authority (representing parents, teachers and the community) issues brief statements of general policy on aspects of curriculum,but by far the greatest responsibility for school policy and curriculum development rests with school boeards and teachers.

This approach is often contrasted with the more traditional practice in other Australian school systems of centrally produced syllabuses and associated curriculum materials which are issued to all schools and used by all teachers. In this case the role of the school is to adapt the curriculum to local conditions but always in conformity with the rather detailed departmental policies.

There are pressures within the A.C.T. from some teachers, parents, employers and others, to reduce the freedom given to schools by such measures as introducing a compulsory core curriculum or at least 'curriculum guidelines', by introducing external examinations (in contrast with the current school-based assessment procedures) and by implementing some form of minimum competency testing.

It is easy to liken such changes in approach to the swing of a pendulum, with central control at one extreme and school autonomy at the other. However,this is far too simplistic a model to describe the thinking on decision-making in the A.C.T. school system. The educators in the A.C.T. are addressing themselves to such fundamental questions as who should be involved in policy-making in education? What types of decisions should be taken at various levels in the system? What is the role of the central administration when it is agreed that the clients of the system (parents, students, the community) should participate in all important policy decisions? The answers to these questions will vary from school system to school system.

Thus while practices in the A.C.T., developed as they have been in very recent years, provide an interesting case study, they can do no more than provide food for thought for those involved in other contexts. Few others have the benefit of creating a new school system: change in long established systems will inevitably be more difficult to achieve.

Victoria

The visit to the State Department of Education in Victoria was the first introduction of some of the participants to education in Australia,and it therefore served as an orientation to the education system and to relations between the States and Commonwealth agencies.

The Victorian Institute of Secondary Education (VISE) took over the responsibilities of the Victorian Universities and Schools Examinations Board (VUSEB) in March 1979. VISE,however, feels that there is a need to formulate assessment provisions on a wider basis than that suited for university entrance examinations. There is the need to offer students information and guidance and to maintain dialogue among the various sectors of the educational community and between the community and the world of work.

Thus while VISE has as its primary responsibility testing for Year 12 students, the Institution also has a concern for all school leavers in the transition from school to employment or further study.

VISE has a measure of independence both from the university and from the State Education Department. It works, however, very closely with these and other education sectors.

VISE has supported moves towards greater teacher participation in devising curricula and in conducting assessments such as significant moves towards school-based decision making and changes in assessment for Year 12 and below.

VISE is not intending to remove the higher school certificate examination standard. It has the belief that the achievement level of a student is best determined by taking account of his or her work at school in combination with test scores. By 1981, the total assessment in each subject will consist of not less than 50% and not more than 70% from the external examination. VISE is currently giving assistance to curriculum planners and developers by:

- providing and explaining guidelines to those submitting courses for accreditation;
- identifying existing resources;
- assisting curriculum development groups in their activities.

Western Australia

The Education Department of Western Australia has developed curricula and a large volume of course materials in subjects such as social studies, science, mathematics and English. These books are supplied to the schools on the indents sent by principals. The cost is met from money allocated on the basis of the number of children in each class and the cost of texts. However, the principals have the right to purchase books other than those on these lists if they so desire.

Principals and teachers have freedom in the use of curriculum materials.

Co-ordination of curriculum development with other allied sectors - teacher education, audio-visual aids, library services - is done at the level of Assistant Director. Printing of materials is done at the government press and distribution is through the school supplies section of the Education Department.

The regional offices of the Department of Education also have their own staff for curriculum work. One of the regions in the Metropolitan area had 10 such officers in the various subjects and also a 'School-based curriculum development officer' (no other region has such an officer yet). These officers visit schools, help the teachers and supply the feedback to the Education Department.

A survey had been conducted to obtain the views of the principals on curriculum development and the work of these regional curriculum development officers. The principals have not been able to contribute in a substantial manner with suggestions for the development of curricula. Their main suggestion has been a request to send the local curriculum officers to their school to help their teachers in the use of local resources, use of teaching aids and other aspects of implementation. Action is now being taken to promote the production of local school-based curricula prompted by the fact that there are nearly 120 small schools in the State. At the discussion that ensued after the visit, it was explained that it was felt necessary that suitable steps should be taken at the State level to integrate or at least co-ordinate some of the various subject areas and reduce the burden on schools of too many subjects, syllabuses and curricular materials. This aspect will be studied very carefully and a strategy planned out.

At a visit to the Catholic Education Office, it was explained that while the State Department of Education has responsibility for oversight of non-State schools such as those in the Catholic Education system, it does not attempt to effect any controls over these schools.

3. Teachers' Centres

The participants visited a number of Teachers' or Education Centres with a variety of purposes, sources of fundings and functions.

A study tour of the O'Connell Education Centre in the Australian Capital Territory covered the library and information service, media production and loan service, instructional materials production service, and training service. This educational resource centre was seen as a good example of efficient running by a small number of staff but still responsible for comprehensive services to teachers. The practical approach of the Centre towards design, production and utilization of the facilities is a factor contributing to the success of work carried out by the Centre. Teachers use the facilities and advisory services extensively.

The Inner City Education Centre (ICEC) in New South Wales is an autonomous institution funded by the Schools Commission. ICEC was established by a group of community leaders, parents and teachers concerned with upgrading the quality of schooling in Inner City Schools. It is responsible to a Board of Governors, the majority of whom are parents and teachers. The number of professional staff at ICEC is four, one of whom functions also as administrator of the Centre. There are no permanent support staff.

The ICEC's role is one of catalyst and facilitator. It generates, through informal liaison with teachers and schools, interest among teachers in innovative projects of various kinds, particularly in those which enable teachers to develop their own teaching resources. It has no supervisory function,and teachers use the Inner City Education Centre on an entirely voluntary basis.

ICEC employs a low-key, informal approach to encourage teachers to consult ICEC officers and use its library and information resources and equipment for production of materials. Its basic approach is one of responding to the needs of teachers.

ICEC issues a monthly newsletter to schools and also writes to particular individuals who would be able to get others involved either in providing expertise or responding to a request for assistance.

ICEC staff are experienced in working with people and are able to conduct or help in in-service courses at the schools' request.

Participants were interested in ICEC as an apparently effective agency involving little capital and recurrent expenditure but which is still able to support teachers in educational projects.

The Hawthorn Teachers' Centre in Victoria is responsible for in-service teacher education. It is a sub-division of the Teacher Education Division of the State Department of Education.

The two main programmes of this Centre are:

- an enrichment programme available to all teachers; and
- a qualification programme for teachers who have not had four years of teacher education. The number of teachers taking this programme has been declining since 1978. The content of the programme is a combination of advanced theoretical and academic knowledge with work designed to up-grade professional competencies. This type of programme is parallel with those developed by Teachers' Colleges.

4. Colleges of Advanced Education

All the colleges visited were multi-purpose institutions,that is, teacher education was one of a number of schools or faculties providing education for a variety of professional and administrative work. Courses led to both degrees and diplomas in professional fields.

The Kuring-gai College of Advanced Education in New South Wales offers two types of courses in teacher education:

a) three-year integrated course; and
b) one-year course for those who have a degree.

The three-year integrated course offers four core courses in education, four core courses in educational psychology, a course in child development, a course on education and society and a course in curriculum theory and practice. Three areas are offered for specialization and a student has to choose one. Practice teaching is done for 18 weeks, 3 weeks in each semester. For subject matter components, the courses are taken in the School of General Studies. Curriculum development is proposed for introduction in the forthcoming Master's Degree programme. Schools are affiliated to the college for practice teaching. Teacher-trainees watch demonstration lessons, two hours a week for one semester.

The thrust of the faculty is in special education and school librarianship. Individual faculty members are involved in in-service teacher education.

Staff commented that there is a feeling that curriculum change is a bit too fast in New South Wales. There is a swing back to and demand for a common curriculum to ensure maintenance of standards and compatibility of schools.

The College has a beautiful campus. The architectural design and interior decoration gave a very impressive feeling of space and colour. The curriculum resources and audio-visual materials are well arranged and seemed to be very much in use.

The School of Teacher Education of the Canberra College of Advanced Education mounts both undergraduate and graduate courses, which include:

- a 3-year Diploma Course in Early Childhood or Primary Education;
- a 4-year B.Ed. Course in Early Childhood, Primary or Secondary Education or Teacher Librarianship;
- 2-year undergraduate course for TAFE (Technical and Further Education) Teachers;
- 1-year pre-service diploma course for graduate students;
- 2-year Master of Education course for professionally qualified teachers.

An interesting feature of these courses, particularly the B.Ed. course, is the healthy balance of:

i) application of psychology, sociology and philosophy; with
ii) curriculum organization, presentation and evaluation; and
iii) in-depth studies in particular areas.

The College also has an impressive curriculum resource unit which not only stocks all kinds of curriculum products, but more interestingly has multi-media production facilities which the students can utilize for practice teaching purposes.

The Western Australian Institute of Technology was established by a special Act as an autonomous Statutory Body and caters for 11,000 full-time and part-time students. The WAIT campus extends to 250 acres and is a very well-planned educational colony.

Courses leading to degrees in education,a 4-year general course in Education and allied subjects or a 3+1 (viz. a subject course + a professional year in Education) have been provided.

Practical teaching exercises are provided once a week in general for the 4-year undergraduates and a period in schools every semester for the 3+1 group.

It was made clear that the staff of the Education Faculty keeps in close touch with new syllabuses and the material being prepared and sent out by the Department of Education.

5. Visits to schools

New South Wales

Marrickville Primary School has an enrolment of 1100 pupils and caters mainly for migrant children. The Greek community is the major ethnic group in the area,and 800 of the children are Greek.

The medium of instruction is English. Greek, Lebanese and Arabic are also taught as community languages. In addition,other materials such as books and music are used to bring the culture of these communities into the classroom.

There are 51 teachers and about 25 other staff, of whom 10 are teacher aides who help in special activities like teaching of languages and home science.

The Schools' Commission has allocated about $200,000,and other sources also contribute aid. In general the child in this school is better provided for financially than his counterpart in the average school.

Some of the noteworthy items were:

1. Parental participation has been organized very intensively. The parents come in to find out about their children, teach their languages, study special subjects like English and maths so that they can help their children at home. Most of those who come to the school are mothers with infants. There are special child-care centres organized. A community centre has been organized. A teacher has been put in charge of this work.
2. Special classes are held for children requiring language development.
3. The factories nearby provide the school with off-cuts,etc. for the children's handwork which is done in a very able way. (However, pollution of the air is a severe set-back to the health of the children).

Marrickville High School is a girls' high school that is planned to become a co-ed high school. At the moment there are 100 boys in Year 7. This school has 900 students only with about 63 teachers. 80% of the student body are from migrant families. Since 1975, following the policy of the N.S.W. State Department, the school has tried to be more autonomous in the implementation of the curriculum within guidelines set by the State Department. In executing this new policy, the school has three levels of curriculum development activities:

a) School level involving all staff;
b) Faculty level;
c) Teacher level.

It is recognized that there are two degrees of independence with regard to curriculum development in the N.S.W. school curriculum. At the junior level (Years 7-10) the State Department only outlines the general objectives to be achieved by each curriculum area for each grade level. The school has the freedom to develop programmes to achieve the objectives following general guidance formulated by the State Department.

At the senior level (Years 11-12) the State Department outlines the curriculum in more detail. This includes topics to be covered. However, the teacher and the school have freedom to propose modifications and other recommendations. The school should have approval from the State Department before implementing the proposed modifications.

There are two major types of programme, required courses and elective courses.

Since the family backgrounds of the students are so heterogeneous in both their social and cultural origins, the main problem faced in implementing the curriculum is language. Many efforts are made in this school to cope with language difficulties encountered by the students.

As opposed to the high school system in the A.C.T., which separates junior (Years 7-10) from Years 11-12, this school administers under one roof programmes from Years 7-12. However, only 50% of Year 10 students move to senior level. Before graduation, students from Year 12 have to take the external examination administered by the State Department. This final examination does not influence whether they will graduate or not.

Cumberland High School caters for a fairly wide range of learning areas/subjects in its curriculum including English, maths, social studies, Asian studies, foreign languages such as French, German and Indonesian, home science, textile and design, metal and wood technics and commerce.

One issue that consistently emerged in discussion with the Principal and Deputy Principal of the school was that success of school-based curriculum development (especially that of Asian social studies in the school) depended on creativity, motivation and sustainability (and continuity) of effort on the part of the staff. The nature and output of such endeavour may change with change of school staff.

The Principal of the International School gave a brief history, philosophy and outline of the activities of his school. The idea of promoting international understanding is different from that of the other 'international' schools in the sense that it is a private school run by a former teacher to promote in Australian students an understanding of the ways of life, cultures and overall development of people in other lands. Participants were invited to visit classroom activities in grade 7. Students asked participants to tell them about their own countries. They showed keen interest in other countries and asked a number of questions. The other outstanding feature was the way the students and teachers co-operated in improving the school grounds as well as in planning learning-teaching in the class.

Participants admired the sense of devotion on the part of the principal and his staff. The most essential principle and practice in this school is academic freedom to learn. The collection of books in the library is very large in relation to the small number of students (130). Participants were very interested, and suggested that the school conduct a follow-up project, to determine the effectiveness of learning-teaching in the school, by studying the further education and success/failure in the world of work of the graduates of this school. The school principal said he was thinking of undertaking this project soon.

The Correspondence School caters for students in isolated areas and in hospitals, and for those who for other reasons cannot attend an ordinary school. Participants saw the detailed lesson plans, the system of sending out, marking and returning student work. Each student had a teacher for each subject area who monitors the student's progress, advises and assists with problems. The school develops its own curricula in accordance with the guidelines of the Department of Education and prints its own materials. The extensive production, curriculum and materials development and mailing activities required to provide an effective service means that the cost of educating a child through the correspondence school is considerably higher than through a normal day-school.

Victoria

The impression gained from the visit to Eltham College was that the capable leadership of the principal, strong support from the community, and the ability of the curriculum co-ordinator to understand and interpret the syllabuses plus the availability of necessary equipment and supplies are the main contributing factors to the success of this unique school. The participants would have appreciated more time to observe classroom activities and in-depth discussion with teachers. However, it was felt that Eltham College demonstrated a good example of effective administration and successful curriculum implementation.

Maidstone Primary School is a typical example of a school adopting school-based curriculum. The staff of this school have formulated a school policy that includes:

a) School aims and objectives;
b) Areas of responsibility of Principal, Deputy Principal and group leaders;
c) School organization;
d) Evaluation technique.

The layout, the facilities and the classroom environment of this school are of the first quality. Teachers are required to plan their teaching programme and to timetable and plan activities so as to maintain discipline.

The school is organized into three main units for instructional programmes and administrative purposes. Each unit has a teacher to whom other teachers in the unit are responsible.

The student body of this school is 350 with 11 teachers, three specialists and four part-time teacher aides.

Western Australia

Loreto Convent (Nedlands) is beautifully situated overlooking the Swan River. It works on an 'open plan'. It is well-equipped and has a dedicated band of teachers. Since the holidays were still on, the children were not in school. However, the Principal and Staff described the school system at work. There is no public examination until the end of Grade 12 - the school issues performance and academic certificates prior to this grade. The teacher training programme was discussed,and it was evident that a period of three years is the average time for training at the College of Advanced Education for primary-level teachers and of four years at the University for secondary level.

Girrawheen Senior High School has 1100 pupils and a staff of 71 teachers and nearly 20 non-teaching staff. During a tour of classes, laboratories, library and gymnasium, the following points were noted:

- The school develops its own curriculum where necessary and send it to the Department of Education for approval. In general this need has not arisen and the teachers have relied on the material supplied by the Department.
- In the special maths rooms, the children study in groups.
- There is also a workroom, where the curricular material in maths and students' work are displayed. The children buy

the books prepared by the Education Department from the school bookshop at a concession.

- There is no school uniform.
- The library is very large and staffed with 3 librarians.
- Girrawheen Senior High is a comparatively new school (5 years old) and caters to a new settlement of middle-class families.
- Facilities in the school are of a high standard. The gymnasium is specially designed for physical education.

While Christ the King School mainly follows the curriculum developed by the Department of Education of Western Australia, special programmes have been organized in language teaching to the non-English speaking pupils, viz. Italian, Spanish and Vietnamese. The parents and local community are also involved in this work and home visits are also made when necessary by the teachers. 'Religion' has had to be used to attract the Spanish students to the school.

A very good resource centre is also functioning in the school with material which has mostly been prepared by the children.

Australian Capital Territory

The school-based curriculum at Forest Primary School relies on the extensive sources of syllabuses and curriculum materials produced both in Australia and overseas. Modification of such materials is carefully made to suit the school objectives. An outstanding programme is the promotion of cross-cultural studies by students. This school conducts the teaching-learning of Indonesian language and culture.

For Indonesian students studying in this school, it is a fine example of promotion of international understanding. Visiting this school, participants understood the value of international relationships as well as being impressed by an effective method of teaching language demonstrated by an able Australian teacher teaching Indonesian language for both Indonesians and students of other nationalities.

In school-based curriculum planning and development at Telopea Park High School, teachers, parents and students come together to discuss programmes of study. Curriculum evaluation is a continuing process. The School Board makes final decisions on curricula.

Telopea Park High School aims to develop the students in a variety of ways. Re-location days when the entire school or single forms have activities such as inter-school visits and excursions tend to develop good relationships and rapport between teachers and students as they interact in different situations.

Year 7 has a set but diverse curriculum chosen in the belief that this wide spectrum will enable students to choose their future studies on the basis of experience in English, mathematics, sciences, language, music, history, social sciences, physical education and craft. For years 8, 9, and 10 there is a common core of studies, with the students given opportunities to choose within the core studies indicated by the school. Foreign students are given a special programme of English as a second language.

Duffy Primary School is one of the many open-plan schools using a group or team teaching approach. Generally 'open-plan' in Canberra means schools lacking interior partitions. The degree to which the instructional space can be considered 'open' depends on two factors - the size of the teaching space and the use of partitions.

In addition to twenty-six full-time staff,the school has a remedial reading teacher operating from the schools' reading centre and a school counsellor who visits the school on two half-days each week to assist teachers, children and parents.

There are 560 pupils organized into the following age-range groups for learning, 5-6 years, 6-8 years, 7-9 years and 9-11 years. The learning spaces (classrooms) are called units. There are four four-teacher units and one three-teacher unit. Each of the units consists of a large teaching area,a small enclosed teaching area, a teachers' office or work-room, a store and a 'wet area' for arts and craft and science.

Other facilities include a portable classroom, the library, hall/gymnasium which is multi-purpose, two sick-rooms, a reading centre, staff rooms, canteen, pottery room, two teacher assistant work-rooms and a school oval and playground.

As stated earlier, open-plan teaching strategy is based on team or group teaching. It can combine the various talents of the teachers of the team to the benefit of children. It provides space which is capable of adaptation to meet various instructional needs. The open classrooms do not restrict as much the child's instinctive desire for movement. They also provide a more stimulating environment.

As in all schools in the Australian Capital Territory, curriculum development is school-based. This means that teachers in the school develop the curriculum.

In Duffy Primary School this is done by five curriculum committees headed by the senior teachers of the school. For efficiency and convenience in planning, the school activities are grouped into five subject areas,namely,mathematics, language arts, creative arts, environmental studies and physical education. Before any curriculum is implemented, the Curriculum Committees make recommendations which are put before the whole staff and interested parents.

The curriculum in essence is planned to develop skills and intellectual curiousity. In pursuance of this aim, it must provide the students with a sound grounding in basic communication and mathematical skills (e.g. reading, writing, arithmetic and verbalization) and develop an ability to communicate ideas and feelings effectively.

The professional staff meet every Wednesday to discuss issues which are raised in relation to school administration and curriculum areas. Some of these issues include assessment processes, community participation in teaching, teaching materials, teaching methods, etc.

Teachers in Duffy are assessed by the 'peer assessment' method. A teacher is assessed by a panel consisting of the Principal or one of the Assistant Principals, the teacher's supervisor, usually one of the senior teachers, a classroom teacher and in some cases an interested qualified member of the community. The report of the panel determines the future promotional avenues for the teacher.

The school is fully staffed and equipped. One of the most significant matters observed was the philosophy of the school which emphasized a warm co-operative atmosphere where teachers and children in co-operation with parents are happily engaged in developing their talents, skills and abilities to the fullest extent of their capabilities for capacities.

The staff selection done by the Principal takes into account a teacher's willingness to serve in an open-plan teaching situation and places importance on applicant's co-operative attitudes.

It was gathered from the general discussion that the success of open-plan schools relies heavily on two main factors; firstly on the availability of suitably qualified teachers,and secondly on the availability of suitable curriculum materials. Open-plan and teaching teams are designed to cater more effectively for individual differences. However, this can be quite unsuccessful if the right kind of staff are unavailable.

The quantity and quality of materials must not be used as a criterion to determine the quality or the effectiveness of learning that is achieved. The most important factor is the quality of teachers and their commitment to teaching and assisting the children under their care.

During a tour of Dickson College, which is a senior high school for Grades11 and 12 students, and a stimulating discussion with the Principal, the following points were noted.

The cost of renovating the school, from a junior high school to a senior high, was as high as if a new building had been erected, as some of the renovations were of a major nature,and the parents wanted their children to have the best possible facilities. The College Board included two students and three parents as well as two teachers, the Principal and a member of the A.C.T. Schools Authority.

The college curriculum extends over a wide spectrum, ranging from academic courses to more practical ones like building construction, driver education and spinning and weaving.

The student population included 'mature age' students (adults who had been 'promoted' from evening classes).

The students showed a strong preference for the more practical courses like motor maintenance, maths and secretarial studies and psychology.

The teacher-pupil ratio is only 1 : 12.

The school is so advanced as to have its own computer terminal which seemed very popular and useful to the students.

Although the curriculum is school-based, there seemed to be quite a strong bias towards courses designed for entry into tertiary institutions.

There are no external examinations at the end of year 12. Students are assessed by teachers and comparability between schools and between courses is maintained by the Australian Scholastic Aptitude Test which is taken by all A.C.T. students who wish to enter tertiary institutions.

Part III

DISCUSSION OF VISITS

A panel of Australian participants answered questions from the APEID participants arising from the visits to schools and educational organizations.

The majority of questions were concerned with the freedom given to teachers and schools to design their own curriculum. In particular, there was concern that the quality of education might not be maintained in the absence not only of examinations but of any supervision of teachers.

The panel emphasized that the highly decentralized systems of Victoria and the A.C.T. were not typical of all States. These were the ones that gave the greatest emphasis to school autonomy and school-based curriculum development. Other States provided guidelines or syllabuses and even textbooks published by the Departments of Education.

Points raised in the discussion of this issue included the following:

- There is a hidden curriculum at work in schools which affected the processes of teaching and learning to produce a high level of conformity. For example, differences between Malaysian and Australian schools were not in content but in educational style which reflects the culture of the society.
- Style of school life can be neglected in schools with a rigid structure. Duffy Primary School was quoted as an example of a good co-operative atmosphere.
- Giving more autonomy to teachers can enhance teacher professionalism and thus the quality of education. An alternative view was that absence of external evaluation or supervision led to a decline in educational standards.
- If supervision is relaxed, it is essential to provide teachers with resources and support personnel to assist with curriculum development. Inspectors become advisory teachers and consultants.
- The load on teachers is too great if they try to undertake curriculum development from scratch. They can select, adopt or adapt ideas and materials from outside the school as well as create their own curricula.

- Even in Victoria and the Australian Capital Territory, there were many external constraints on schools from the administration, tertiary institutions, parents and community opinion. Moderation procedures, textbooks, and co-operative work between teachers all tend to reduce differences between schools leading to some sort of indirect pressure to conformity.

Other matters raised included:

1) The credibility of university people with schools and the duplication of work rather than co-operation;and
2) The value of team teaching and how well it worked in practice.

Part IV

THEME ANALYSIS

THEME ANALYSIS A

Planning and organization of curriculum development for present and future needs

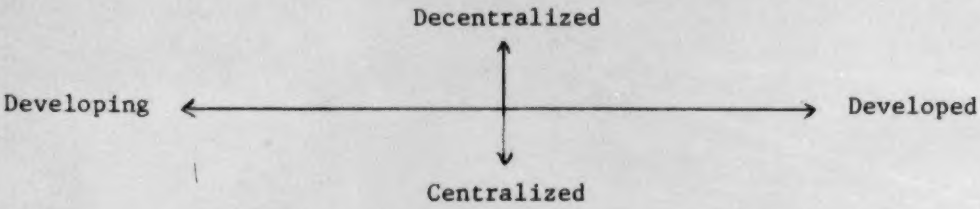
Part A The particular functions of a national-level curriculum development agency and how they relate to the State, regional and local levels

The seminar first examined the question of curriculum development in terms of notions of the state of development of a country. The meaning of development when applied to a country is subtle and can take on various significances as well as being used in misleading and even erroneous ways.

One meaning of development applies to the resources within the educational system itself. That is, some countries have a much greater supply of well-trained personnel than do other countries. For example, there may be many teachers who have had, in their training, much of the knowledge and many of the skills we associate with curriculum development. Other countries may have teachers who barely have knowledge beyond the level of the students they teach. The possibilities for these two sorts of countries are clearly different, and the strategies and processes for curriculum development will need to take these differences very seriously into account. It may be useful to think of teachers as being on a dimension of dependence ⟷ independence in the sense that more highly prepared and skilled teachers should be able to create and/or utilize curriculum more effectively and thus have different requirements in regard to central support.

However, there are other senses in which development would apply quite differently. For example, a number of so-called developing countries have much more clearly developed sets of national objectives than do other so-called developed countries. In other words, 'development' is not a single dimension for describing countries.

The oversimplified use of 'development' as a persistent dimension for defining the curriculum task bacame very clear when the seminar tried to use the following model in which two dimensions were introduced for discussing curricular roles: (i) developed - developing and (ii) centralized - decentralized.



While this model had some initial attractions, it proved to be oversimplified and tended to produce polarities. In particular, it tended to push an association between 'Developed and Decentralized' and 'Developing and Centralized' which was not helpful or accurate. For this reason this model was not fully used for further analysis.

The model also confuses in its other dimension - centralized - decentralized - too many aspects of the curriculum process. For example, a country with a single national curriculum may be seen as centralized and yet it may make use of many decentralized processes in arriving at that common curriculum. Furthermore, it became clear in the course of the discussion, that there is a great need for a centralized Curriculum Development Centre with appropriate roles even when some features of the curriculum development processes are largely decentralized.

To accommodate these aspects into the model,there would need to be at least two axes of centralization - one that related to the existence of plurality in the curriculum content, and one that related to the process of definition and development of these curricula. Pursuit of this model would have led to a confusingly complex one.

Accordingly, the seminar took another approach and set out to define the range of possible roles that national Curriculum Development Centres and more regional or local bodies should have in three types of curriculum situation:

a) a centralized common curriculum;
b) a decentralized situation with plurality of curricula;and
c) combination situations.

For each situation, it was noted, the important and ultimate stage of implementation remains with the unit of education (school and teacher).

It is also recognized that curriculum development in any country has to operate within constraints over which the curriculum development structures have little or no influence. One very obvious constraint in many situations is the public examination system. Often this is quite outside the orbit of control of curriculum development even though assessment of learners' achievement is an integral feature of the curriculum development process. A separate examination structure is a major constraint that constricts the possibilities of curriculum development and acts as one of the forces which make curricula conservative and oriented to the past rather than oriented to social change or to the future.

a) Centralized curricula:

National roles (Generally to maintain and reform the curricula)

Plan national standardized curricula to meet national needs;
Relate national needs to international demands;
Translate these needs into curriculum requirements for the various levels (syllabuses, texts, guides, equipment, micro-testing, etc.);
Design of dissemination;
Evaluation of effectiveness on learners;
Research and developmental experimentation.

Provincial or regional roles

Some participation in the first four roles listed above;
Assisting in supervising evaluation of effectiveness of new curricula on learners and feedback of results to national agency.

Unit role

Implementation.

b) Decentralized situation with plurality of curricula

National roles

Assist local bodies to identify local objectives;
Transmit to local bodies guidelines re the national objectives;
Communicate international demands for education to local bodies;
Assist local bodies with the curriculum development processes or develop alternative material for them;
Act as clearing house;
Co-ordinate and prevent duplication and waste of resources;
Identify and prepare exemplary material for 'gaps' in curriculum of local bodies;
Provide an evaluative function by harnessing ad hoc expertise where required;
Develop models for, and examples of, training of the curricula expertise required in decentralized curriculum;

Provincial or regional or local roles

Identification of local objectives for curriculum;
Detailed curriculum development from national and international guidelines;

Identification of alternatives among existing resources;
Planning and operation of dissemination of ideas and materials;
In-service training of teachers regarding the curriculum;
Supervision of implementation of curriculum in schools;
Evaluation of effectiveness of new curricula on learner.

Unit role

Implementation

c) Combination situations

In practice curriculum development is rarely completely centralized or decentralized. In different situations the roles set out in a) and b) above may be combined in a number of ways, such as:

i) Procedures
Provincial, regional and local agencies can participate in national roles as set out in a) above. Procedures can be established so that national curriculum planning to meet national needs and international demands is based on discussion and concensus. Procedures which allow equal participation in material development,dissemination and evaluation can shift tasks away from the national level. In general, these procedures will optimize the use of national and local resources.

ii) Split curricula into a core which is a national responsibility for definition and development (Situation 1) plus a remainer part which is a localized responsibility (Situation 2).

iii) Division of curriculum vertically into levels which are national plus levels which are local or regional,e.g., primary (local), secondary (national),etc.

iv) Guidelines from a national body for curriculum for national, international and local objectives, e.g. syllabuses, examinations, etc. Detailed curriculum materials (texts, guides, teaching strategies, etc.,for use in implementing the curriculum) to be developed by local bodies or by private individuals and publishers.

Teacher development

In elaborating these variations of roles in the three types of curricula situations, the seminar was conscious of a dilemma in the centralized situation.

In one sense this situation requires the teacher to be a competent 'technician'. Indeed, it is often adopted by countries because its teachers are not yet trained sufficiently to carry out this minimal curricular role of implementation.

However, the situation provides little prospect for the teacher ever to take on more than this 'technician' role and few countries, at least in the long term, would not wish their teachers to have more complex curricular skills, because no curriculum development can ever prescribe fully 'good' education. Indeed, pride in their role and confidence in their professional contribution are seen as key factors in successful curriculum implementation.

The more 'essentialist' or 'traditionally scholastic' views of schooling (i.e. schools are separate entities within the whole process of education) may reduce the concern over this dilemma, but it remains a problem if high standards are to be obtained. If schooling is seen as more openly interactive with other processes of education or as having a wider range of societal function, then the dilemma is acute.

One solution to the dilemma, tried in a few countries with centralized curricula, is the deliberate allocation of a small proportion (say 5 - 10%) of the curricular timetable to be filled by the implementing units (the school and its teachers).

As teachers 'discover' ways of providing this part of the curriculum, the proportion of time allocated this way can be increased and its successful use may signal the point when some of the combination situations can be introduced. This process can also be expected to lead to improved teachers' skills that will also show their presence in more effective implementation of the given curriculum.

Part B Strategies and processes for translating national goals for development into school curricula

The following processes relating to curriculum design were identified. The discussion time was too limited for strategies of dissemination and implementation to be explored in this context. These topics were however dealt with in theme analysis B.

The first process must be the identification of national goals. Sometimes they are explicit in national plans or the statements of politicians. National goals can have quantitative or qualitative meaning in education, and each demands different curriculum strategies which relate to social, economic, moral and political aspects of national goals.

Regular mechanisms exist in some countries for relaying these to Education Departments from the Ministers more directly responsible.

In other countries, these goals are much more implicit and their identification is a more diffuse process in which the initiative must be with the Education Ministry and its curriculum sections, but contact with other Ministries is still essential.

The second process is one of clarifying the objectives in educational terms and here the participating groups could be educational planners and curriculum specialists.

The third process is one of determining approbation and priority. Here the educational interpretation of the objectives needs to be shared with the originators of the national objectives to check the faithfulness of the translation, to allow the 'priority of the possible' to be given to education and to gain assurance that suitable economic support will be available for the educational resources needed.

The fourth process is one of a broad assessment of how the balance of the total curriculum needs to be altered to meet these objectives.

The fifth process is the work of specialist committees who are to devise programmes within their share of the curriculum. These specialists are charged with matching detailed curriculum in their speciality to the national objectives.

The sixth process is one of review. In this process a higher level body, including 'outside' advisers, reviews the work of the specialist curriculum groups to ensure that the intentions of the education programmes are still related to the national goals. The 'outsiders' here may well include community practitioners who do not normally become involved in the curriculum process.

The fifth process should also involve the practitioners of the inside, i.e. teachers, since only they can ensure the practicability of the curriculum as teaching/learning experiences.

In this way curriculum will be changing in small ways year by year as better understanding of the match of the curriculum to the national objectives is gained and in large ways whenever more major changes to national goals are decided.

Part C The characteristics of a relevant curriculum looking to the future

A number of alternative ways were discussed whereby future relevance can be achieved in the face of severe pressures in education itself which tend to make curricula a reflection of the past or a response to very short-term needs. This tendency to conservatism in curricula and its consequent lag behind national needs must be kept in mind. However, for achievement of a future-orientated curriculum with most of the characteristics listed below, greater assurance of longer-term financial support is needed than is presently available in most countries.

It is also most important,in considering the future orientation of curriculum development, to note that curriculum development must also assume the task of maintaining and strengthening the valuable aspects of traditional societal and cultural values.

Future-oriented characteristics - a range of alternatives

a) An emphasis in the curriculum on process learning to promote greater long-term transferability of learning;

b) Establishment in the curricula of characteristics that are not encouraged by the traditional society outside school, e.g. achievement motivation can be stressed in curricula through assessment procedures like criterion reference testing, or social and cultural acceptance can be emphasized in countries where the tradition is more individualistic;

c) Obvious persistent topics of the future such as energy, race relations, population, can be included even though the detail may need to be changed as years proceed;

d) Long-range planning may indicate a shift in balance, e.g. towards more technologically oriented curricula;

e) Futuristic exercises may become a regular part of curriculum development process;

f) Curricula can be designed with a degree of openness. That is, open -

  i) to external influence, more in contact with future than are most educators; and
  ii) to internal influence from students so that there are genuine attempts to meet their needs as they see the future. (Preparation for unemployment as well as for employment might be an interesting example in some countries).

g) As teachers become more experienced in curriculum development, they will be more able to make the curriculum relevant to community needs. Also the horizons of the children have to be widened to give more understanding of international cultures and the forces that impinge on their lives from outside. The curriculum of the future will have to maintain a balance between these two forces.

h) The curriculum of the future will have to prepare students for situations, life styles and problems, which as yet are unseen. Students will therefore need to be encouraged to be creative, and innovative in meeting new demands placed upon them.

THEME ANALYSIS B

Strategies of curriculum development

Three topics examined together under this theme were:

Appropriate strategies for producing materials;
Planning dissemination to ensure optimum utilization;
Evaluation of the curriculum.

Some overall considerations

Throughout the deliberations on all three topics, the seminar was conscious of the need to bear in mind both the centralized and decentralized approaches towards curriculum planning, development and dissemination. It was felt that the implications of the centralized Research-Development-Dissemination (objectives) model and the more decentralized Action-Research (school-based) model, should be carefully considered in the curriculum design (and hence development and dissemination) process. There seems to be a happy mingling of both approaches in the curriculum development effort of the Asian-Pacific region. However, there is a case for a more serious look at school or class-based action-research on curriculum problems directed towards a more realistic approach to curriculum planning and dissemination, be it in the centralized or decentralized systems of operation.

Part A Appropriate strategies for producing materials

Irrespective of whether the curriculum development process operates in a centralized or school-based setting, the seminar felt that the issues and principles involved are the same; for example in both the centralized and school-based models, an effective materials production strategy is predicated on a good curriculum development design, because the issues of materials production are also the issues of design.

Developing strategies

For effective strategies to be evolved in materials production, several issues need to be considered:

a) Has an analysis of the situation been done? Some of the issues that such an analysis could look into are:

- In what kind of curriculum design setting would such materials be required: centralized or decentralized?
- Are such materials really needed? What materials of similar nature are already available? Do these need to be replaced or do they require adjustments, supplementation, and the like?
- Is there a comprehensive curriculum design on which the materials could be based?
- For whom are the materials intended: student/pupils, teachers, teacher educators or even parents?
- What is known of the larning needs of the target group or groups? Is consideration being given to specific needs of particular groups (e.g. immigrants?)
- What is known of the educational environment and resources within which these materials will be disseminated? What range of teachers' and learners competencies do such materials need to cater for?
- What linkages need to be developed with materials already developed in the non-formal sector (or vice versa)?
- What is the nature and scope of the materials to be produced? Are they in the form of textbooks, range of pupils materials, teachers' resource or handbooks, or all these put together?

These are only some of the major issues involved in such an analysis of the situation. Many others could be raised. The seminar felt that this kind of analysis is essential in order to ensure a realistic strategy in materials development.

b) What national and international goals and educational objectives should be reflected in the curriculum materials to be produced? How can they be best reflected?

In determining the national/international goals of education as well as the education/curricular objectives of the programme to be developed, the materials production planning team may or may not have been involved. Whatever the situation, the materials team needs to ensure that there is continuity of intent between the design and the development phase. Ideally there should be overlap in membership between the design and the production teams, viz, some if not all members of the production team should be involved directly or indirectly in the design phase.

c) What kind of concepts, values/attitudes, skills and other experiences need to be inculcated/modified by these materials?

The assumption is that in the design of the curricular programme, the design team would have considered the concepts, values/attitudes, skills and experiences to be implanted. Even if that had taken place, the materials development group needs to amplify such specifications, in order to ensure relevance. The materials to be produced need to be geared to such needs. For example, if it is a value change that is desired, materials that accommodate only, say, cognitive needs, are insufficient and therefore inappropriate. Also, too often, materials aimed at very young children contain too many different language structures and styles, hence hindering learning. Thus, utilization of language vocabulary and style commensurate with the linguistic level of the learners is an important consideration.

d) Who should be involved in the materials production process: teachers, parent representatives, psychologists, sociologists, curriculum specialists, media specialists, and even the learners themselves?

An effective learning strategy involves good curriculum design, effective teaching, contribution and co-operation of parents, psychological and sociological findings, and learners' interests and abilities, as well as employment of all kinds of media resources. Materials design and production should take into consideration and/or involve such expertise.

Experts' inputs may not all be required at one and the same time. Nevertheless, their contributions are necessary. As their inputs are required as a team, skilful pooling and blending of their respective expertise and experience is essential. This calls for thorough responsible leadership. Such leadership is best provided by a member of the team who has strong grounding in curriculum philosophy and principles, with a practical sense of the resources required. Furthermore, such a leader needs to possess good diplomacy.

e) Has try-out and formative evaluation of the materials been built into the design plan?

As the saying goes 'the proof of the pudding is in the eating', so the efficacy and relevance of educational materials can best be determined in the learning situation. The systematic try-out and formative evaluation in actual learning-teaching situations of curriculum materials is therefore of paramount importance.

f) What kinds of materials are to be produced: uni-medium (of printed form only) or multi-media materials? Are they to be considered as prototypes, or are they for direct mass dissemination?

Depending on the kind of learning/motivational needs and resources available, various media can be utilized to enliven and further motivate and therefore faciliate the learning process - such media could be pictures, slides, posters, films, filmstrips, toys/games, or combinations of these. Educational radio and television have also operated successfully as back-up services in various learning areas. However, the economics and rate-of-return of such services need to be carefully worked out so that 'white elephants' are not created. If the materials under production are to be treated as prototypes, attention should be given to details of production that pertain to their quality, functionality and clarity of intent to would-be duplicators and adaptors of these materials. If they are for direct mass implementation, such considerations are still pertinent, but added to these the durability, costs and dissemination strategy of these materials should also be taken into account and catered for.

What other support resources are required, e.g. have the necessary technical personnel like editors, graphic artists, been catered for? Have the total production costs been worked out?

Too often, a good materials production design can be bogged down by the lack of consideration of technical details like provision of necessary technical support staff, or even provision of funds for production. In some situations the whole question of who should be responsible for the production is an important issue that needs to be thrashed out right at the outset.

If the production is to be contracted out to an 'outside' agency that was not involved in the curriculum design, then quality control and formative evaluation need to be provided for.

Last, but by no means least, has the necessary 'blessing' been obtained from the policy-makers for development and production of such materials?

Experience has shown that lack of consultation with policy-makers and higher-ups in the determination and production of a curriculum materials project can lead to all kinds of production and dissemination problems such as professional, administrative and financial support - especially if the project has politically or socially sensitive implications.

Part B Planning dissemination to ensure optimum utilization

Dissemination as a phase in the curriculum development process has too often,in the past, been narrowly interpreted as the process of handing down to the target groups the curriculum programmes that have been developed. Experience in the region has shown again and again that such a view is over-simplistic and unrealistic. In fact most seemingly 'good' programmes encounter innumerable problems and tend to get into disarray when they get to the dissemination stage. The Seminar was of the opinion that the implementation/dissemination issue is very basic to the overall curriculum design process and should be taken into consideration as early as possible in planning such a design process.

The need for a strategy

The dissemination of a curriculum programme has often been compared to the marketing of a commercial product. While the comparison is valid, the implications and ramifications involved in the implementation of a curriculum programme are so deep and wide that such comparison seems almost facetious.

Marketing a product in the commercial section usually involves promotion of a tangible, ready-made physical product; but dissemination of a curriculum involves implementation of ideas, or change in attitudes/values. In bringing about such a change, so many issues, factors, personnel and agencies are involved, that a systematic strategy for dissemination needs to be planned well beforehand.

Evolving a strategy

Dissemination plans need to be devised while the curriculum programme is at design stage. In fact the dissemination plan should be part and parcel of the overall curriculum design master-plan. This is essential, as otherwise discontinuity or mismatch between the intent and the practice may occur.

The dissemination plan should encompass all the relevant issues and agencies involved, e.g. the dissemination process in terms of steps or phases of implementation; the tasks involved in each step; the role and function of all internal and external agencies involved in each task and in the entire process; the identification and utilization of all kinds of available resources; the need to plan and organize orientation/training programmes; and the need to cost the entire operation.

Whether one operates in a centralized or decentralized system, the above issues are relevant and need to be carefully and painstakingly considered. For every curriculum programme to be disseminated, a planning team that can look into all these issues and generate plans for implementation is desirable. Such a planning team should comprise all the relevant agencies like curriculum developers, teacher educators, supervisors,inspectors, educational media personnel, school administrators, and the like.

Some of the issues that the planning team could look into could be:

i) Whether the objectives, content specifications, and any accompanying guidelines of the new curriculum programme are readily available and clearly stated.

ii) Which parties/agencies need to be involved in the dissemination process?

iii) Are the role and function of each of these agencies clearly defined?

iv) What orientation/training programmes have been or need to be worked out for these personnel?

v) Is there an effective infrastructure, e.g. supervisors, organizers/key-personnel, to monitor or provide consultancy service on the new programme? What professional/physical resources are there at school/district level to support the desired change? Should some kind of educational resource centre be set up?

vi) What untapped/unused educational resources, be they personnel or other physical resources, are there at central or local level that could be utilized?

vii) What assistance can be given by the mass media towards improving communication on and understanding of the new change?

viii) How are the pre-service teacher educators/trainees being geared to the new programme?

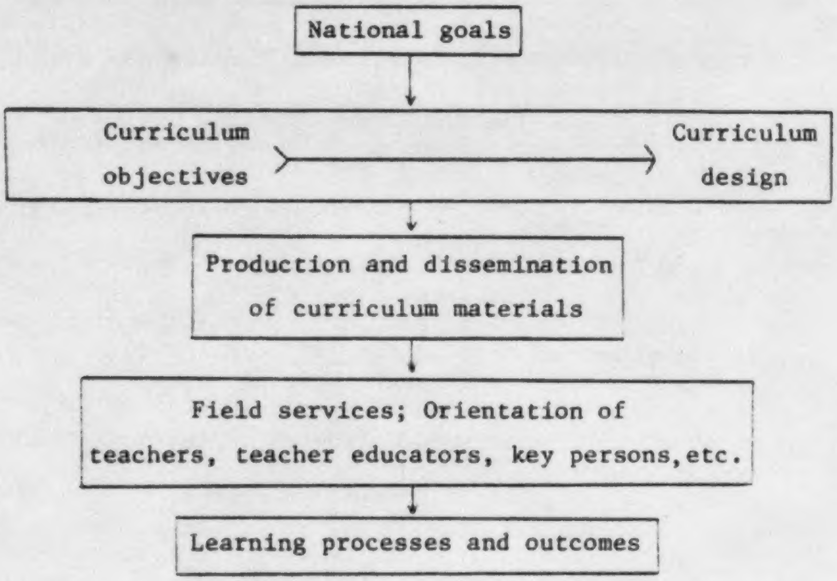
ix) What possible barriers are there at central, regional or local levels that could impede smooth implementation? What strategies could be worked out to minimize or even avoid them?

Part C Evaluation of the curriculum

A curriculum, including the materials, should be evaluated in order to form judgements about its appropriateness and effectiveness. Although every care might have been taken at the planning and development stages, things may not work out exactly as intended when it comes to actual operation in the field. Evaluation is likely to help in implementation also.

Any curriculum development in practice passes through some phases, which may be illustrated on the following page.

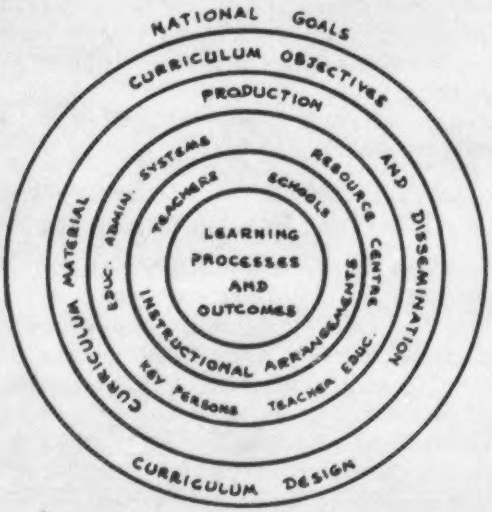
Consideration has to be given to whether a summative evaluation or a final test of learning outcomes (either criterion referenced, or norm referenced), is a good measure of the effectiveness and appropriateness of the curriculum. This is because the learning of pupils and their performance in the final examination is affected by various factors, of which the curriculum materials are only one. Hence, although a public examination, or any other type of summative evaluation, does point out the deficiencies in pupil performance, it does not help to identify the sources of such


National goals
Curriculum objectives
Curriculum design
Production and dissemination of curriculum materials
Field services; Orientation of teachers, teacher educators, key persons, etc.
Learning processes and outcomes

deficiencies, and so has a limited contribution towards improvement of either the materials or the curriculum design.

Formative evaluation should, however, be carried out in every phase of curriculum development in order to provide a feed-back for adjustment, modification or correction. Formative evaluation may focus on the processes as well as on the products of curriculum development in all its phases.

The following diagram may help in identifying the places where formative evaluation is needed:


NATIONAL GOALS
CURRICULUM OBJECTIVES
PRODUCTION AND DISSEMINATION
CURRICULUM DESIGN
CURRICULUM MATERIAL
EDUC. ADMIN. SYSTEMS
RESOURCE CENTRE
TEACHER EDUC.
KEY PERSONS
TEACHERS
SCHOOLS
INSTRUCTIONAL ARRANGEMENTS
LEARNING PROCESSES AND OUTCOMES

The national goals of education are translated into the objectives of curriculum and a curriculum design is developed. The planning stage itself can be evaluated by analysing relevant opinions and judgements of experts in terms of the following criteria:

a) whether objectives are related to the goals;
b) whether these objectives are attainable at the various levels of education for which curriculum is being developed; and
c) the adequacy of the process of arriving at curricular objectives from the goals.

Next, the curriculum design leads to the development of either prototype instructional materials, or actual usable materials. The development of such materials passes through certain processes and there can be formative evaluation of such processes. The products can be evaluated by analysing the judgemental data obtained from teachers, subject specialists and others in terms of the following criteria:

a) relevance to objectives;
b) relevance to the student and his environment;
c) content balance and up-to-dateness;
d) organizational structure of the content.

Further, materials should be pre-tested and tried out in some schools before they are finally released for wider dissemination. A feed-back from teachers and learners on the basis of actual experience of using the materials is desirable.

For dissemination, it is necessary to orient 'key persons', teacher educators and educational administrators. There should be a formative evaluation of such orientation programmes. As in many countries, the materials have to pass through an educational administration system which controls the schools in the matter of syllabuses, textbooks and other materials. The system should be examined carefully from the point of view of channels, bottlenecks, factors which favour the dissemination of the materials, and factors which mitigate against effective dissemination. When the materials are disseminated on a large scale, the processes of such dissemination should be evaluated, and improvement can be made on the basis of such evaluation.

Teachers, the instructional arrangements and the school organization and climate are finally concerned in the utilization of curriculum materials. Any curriculum design may be effective to the extent that the school, its climate, its teachers and the teaching-learning situations allow the optimum use of the materials, and their use in the way that curriculum developers had assumed the materials would be used.

Hence, the use of the materials has to be evaluated in the actual teaching-learning situation in the school. Teaching methods have to be evaluated. Learning strategies used by the pupils have to be studied. The attitudinal components should be particularly looked at because the affective objectives of the curriculum are all too frequently neglected in evaluation, because they tend to be intangible.

Finally, formative evaluation of pupil learning should be undertaken, in order to improve teaching-learning strategies and reinforce pupil learning so that curricular objectives are attained. In this context, the role of continuous assessment of pupil progress as a feed-back to the pupil, and the role which public examinations may play, in either helping the attainment of curriculum objectives, or hindering, have to be considered.

THEME ANALYSIS C

Teaching and curriculum development

Three topics were discussed under this theme

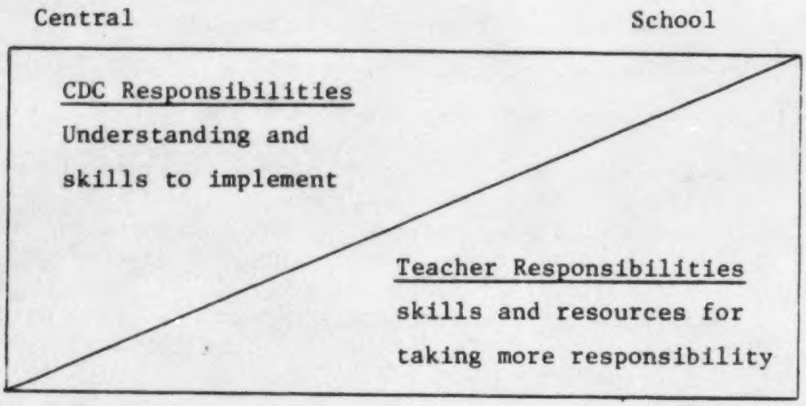
- Selection, training and infrastructure support of curriculum developers;
- Forms of teacher development to support curriculum development and implementation;
- Development of school organization to support curriculum development and implementation.

Some overall considerations

A number of factors were important in shaping the discussions of this theme.

Firstly, the school system and hence the curriculum operates in a country within the larger political, socio-cultural and economic context. The objectives and processes of the curriculum are affected by these factors.

Secondly, the differences between centralized and school-based curriculum systems can be differences of degree and kind. Teacher skills and school organization and resources for the centralized, school-based or the combination system (identified in Theme A) would differ. The responsibility and expertise for curriculum development required at the school level varies in inverse proportion to the degree of responsibility assumed and expertise available at the central agency (CDC) level, as follows:



Thirdly, in addition to the centralized - school based dimension, it is useful to consider the dimension of organized or non-organized implementation structure. Theoretically the following are possible:

a) Centralized curriculum/organized implementation structure;
b) Centralized curriculum/non-organized implementation structure;
c) School-based curriculum/organized implementation structure;
d) School-based curriculum/non-organized implementation structure.

In practice, however, only situations b) and d) were common although a) could prevail in some countries. The situation in c), though possible in theory, possibly did not exist in practice.

Fourthly, a realistic view has been taken in curriculum development. The starting point should be the systems of curriculum development and follow-up of dissemination, teacher preparation and school organizational changes feasible within APEID countries. The experiences of these countries are that:

a) The ultimate impetus for change results from public pressure;
b) The planning for change is the responsibility of a core of specialists which often, but not always, includes teacher educators;
c) The need to prepare teachers for changes is recognized but teacher preparation is not always adequately carried out.

Part A Selection, training and infrastructural support of curriculum developers

Rather than formulate specific criteria for the selection of curriculum developers, the Seminar considered the kinds of expertise required in a curriculum development team and the organizational structure of persons with different expertise and functions to ensure maximum co-ordination and utilization of resources.

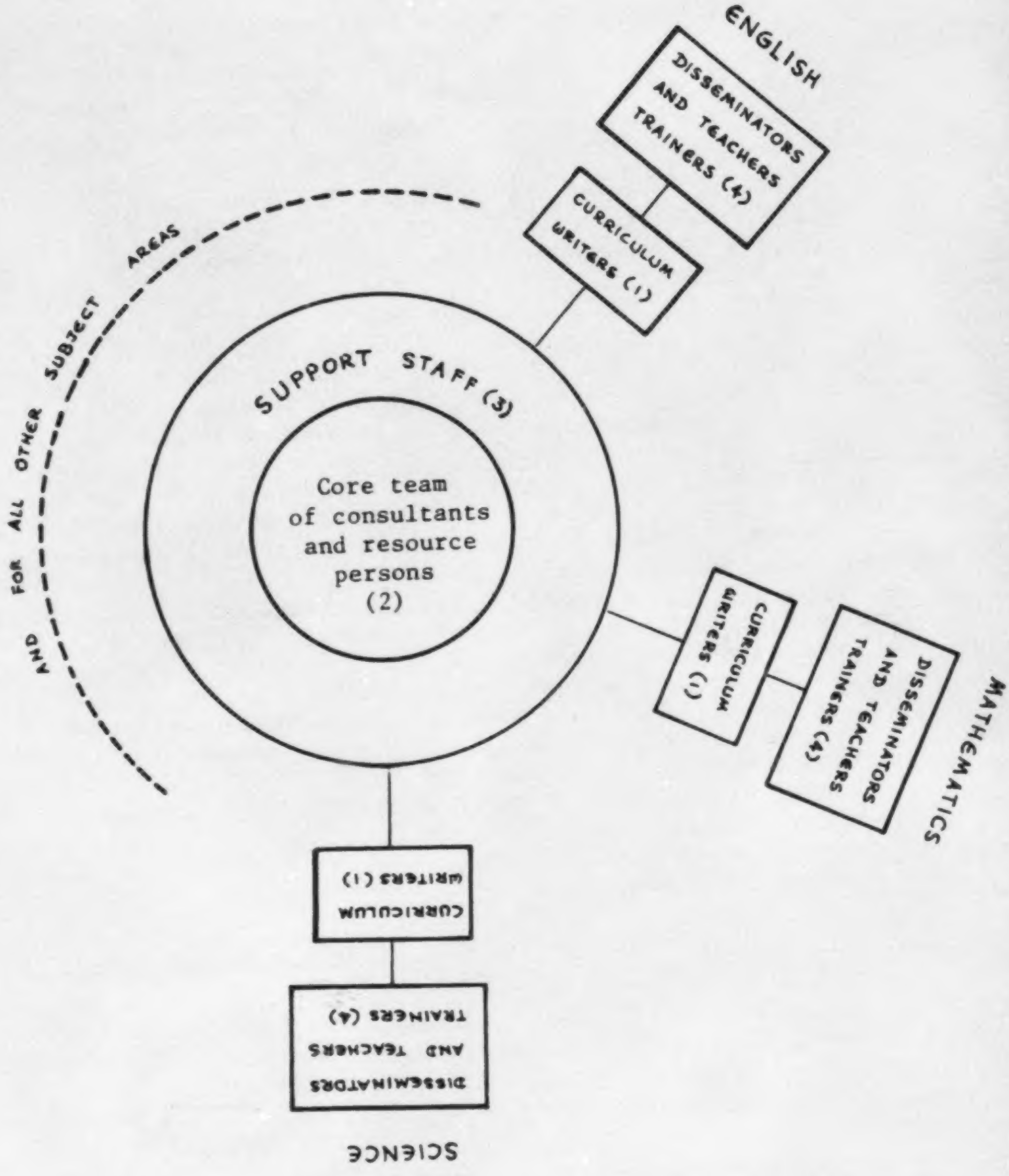
The following types of personnel are required:

1. Curriculum materials writers with
   - knowledge of subject matters for the relevant grade levels;
   - outstanding ability in teaching the subject at the relevant grade levels;
   - external teaching experience in the subject or subjects, particularly experience of a range of diverse school conditions within a country;
   - understanding of the overall pedagogical reorientation necessitating the development of new curriculum;
   - understanding of the typical skills, deficiencies and inclinations of the teachers who will implement the new curriculum.
2. Consultants and resource persons such as
   - specialists with an overview as well as in-depth knowledge of the subject;
   - curriculum design specialists who would advise on the selection, sequencing and organizing of content and processes in curriculum materials for optimum learning effectiveness;
   - teacher trainer/researcher with up-to-date knowledge of institutional methodologies and developments in the field;
   - curriculum evaluators to advise on design of trials, feedback and evaluation.
3. Support staff as well as media advisers, graphic artists, typists and administrative and executive personnel.
4. Disseminators or teacher trainers who will be either
   - the actual curriculum writers where this is possible as with a small state;
   - teacher training personnel not actually involved with curriculum writing but well briefed by curriculum writers.

These groups of people work together on curriculum development programmes. An organizational structure which would be practical for most countries is illustrated in the diagram on the following page.

Part B Forms of teacher development to support curriculum development and implementation

Recognizing the dynamic nature of the school curriculum, the Seminar stressed the importance of adequate teacher preparation for curriculum changes. The following steps of teacher preparation and development in the education system were identified:


ENGLISH
DISSEMINATORS AND TEACHERS TRAINERS (4)
CURRICULUM WRITERS (1)
AND FOR ALL OTHER SUBJECT AREAS
SUPPORT STAFF (3)
Core team of consultants and resource persons (2)
MATHEMATICS
CURRICULUM WRITERS (1)
DISSEMINATORS AND TEACHERS TRAINERS (4)
SCIENCE
CURRICULUM WRITERS (1)
DISSEMINATORS AND TEACHERS TRAINERS (4)

- selection of candidates for training;
- pre-service training;
- certification;
- school placement upon graduation;
- follow-up in-service training and development.

The tendency in many countries is to conceive of teacher preparation solely in terms of the one or two year pre-service course. However, in order to have adequate teachers for curriculum implementation, a school system needs to:

a) select for training, persons with the right personal qualities and commitment to education (motivation and capacity to work in deprived areas being important in some countries);
b) create conditions and incentives which will attract the right type of trainees;
c) structure into the pre-service course teaching on curriculum processes to ensure that trainees develop an understanding of the crucial role of curriculum in the school system and an interest in acquiring curriculum development expertise;
d) expose teacher trainees to actual curriculum innovation projects in their training in order to develop responsiveness to innovation;
e) recognize that a trainee's first teaching experience can be vital in moulding him as a teacher. Trainees and newly qualified teachers should be placed in schools which will mould them into good teachers;
f) strenuously promote and support school-based in-service training activities of various kinds to support curriculum development and implementation;
g) ensure that adequate numbers of competent senior teachers, principals and educational administrators are developed to spearhead curriculum innovation and underpin dissemination of new curricula.

Part C Development of school organization to support curriculum development and implementation

The Seminar stressed that it was vital that the organization of the school should be able to support both the development of curriculum by teachers where curriculum development is school-based, and the implementation of curriculum developed by a central agency.

The following features of the school organization were identified as being of key importance:

a) The school administrators (principal and others with leadership roles) should be supportive of the new curricula.

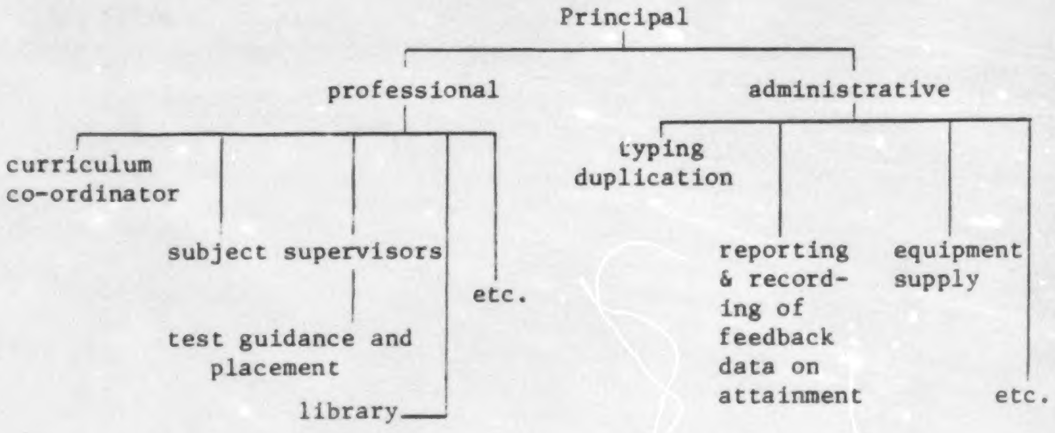
b) Where teachers are to develop their own curricula, the following support should be provided:

- additional time or personnel who will relieve the teachers of routine tasks;
- equipment and supplies;
- academic/technical advice;
- reference materials and facilities;
- schemes of professional development or funds to finance such schemes which include exposure to curriculum development and implementation projects outside teachers' own schools.

c) Where teachers are to implement centrally produced curricula, the above-mentioned support would facilitate actual implementation of the curricula but is required to a lesser extent.

d) Apart from the internal school resources, the school administrator should obtain external resources from the central agency either for groups or for individual teachers.

e) The school organization structure should promote a co-ordinated and efficient use of both internal and external resources. The following is suggested:


Principal
professional
administrative
curriculum co-ordinator
subject supervisors
test guidance and placement
library
etc.
typing duplication
reporting & recording of feedback data on attainment
equipment supply
etc.

f) Where a new curriculum requires modifications to the overall school system or aspects such as its curriculum organization, such modifications should be made to facilitate implementation of the new curriculum.

Part V

SUMMARY AND RECOMMENDATIONS

A number of recurring issues and concerns constantly emerged in the course of discussions, presentation of country reports, visits and small group work. These underlying theoretical issues were not necessarily referred to directly, but were often approached indirectly as participants discussed the organization and practice of curriculum development in their countries. The following were some of the key issues which confronted the Seminar.

1. Inputs into curriculum development

The question of what information and whose views should be taken into account in the process of curriculum development and the mechanisms which needed to be established to enable this to happen were constantly referred to.

Several participants queried the adequacy of the data base from which they were working, and suggested that more research should be conducted into both the operational curriculum, i.e., what was actually happening in their schools, and into the views of teachers and the community on the needs of education. Without this data base, it was suggested, curriculum developers were in danger of basing their work on assumptions which were not well founded in practice.

Many participants emphasized that curriculum developers could not work in isolation, but needed to take into account the views of a wide range of people. In some countries, there were well defined national goals related to matters such as promotion of national identity, maintenance of key features of the traditional culture, and fostering the goals of economic development. In these countries, the aims of education and thus of school curricula were based on national aims. In other countries, there were no statements of national goals, and the process of defining the aims of education was more diffused. In both cases, it was considered desirable to establish procedures for working co-operatively with teachers, other government agencies, subject specialists, local school communities and others.

In this connection, the question of whether there should be a core curriculum of learning experiences for all children, and if so, who should determine the nature of this core, was touched upon. In general, countries with well defined national goals accepted that this implied a core curriculum based on these goals. Other countries with a multicultural population had greater difficulty in defining the nature of the core. The need to prepare students for a future which might be quite different from the present society on the particular local culture in which they lived was one factor to be taken into account. A persistent theme was the need to harmonize and balance education for a new and unknown future and education based on traditional tested values and a sense of continuity. The future would not be entirely new but would evolve out of the present. Future citizens would need maturity, creativity, adaptability and a sense of social responsibility. These are not new virtues but would assume greater importance.

2. Diversity

There were a number of practical problems which pointed to the need for some diversity even where curricula were centrally developed and prescribed. In some countries, there are a number of tribal regions, each with their own distinct language and culture, which have to be reflected in school curricula. Other participants expressed concern over the effectiveness of rural schools and the need to take cognisance of the rural/urban gap when developing curriculum. The effect of out-of-school experiences on the child's development and the need to take account of this in the design of school curricula implied that, since these experiences took place in the local community, school curriculum should be capable of modification and adaptation to meet local circumstances. In rural areas particularly, schools were seen to be more effective where they were well integrated into community life,and therefore there was a need for teachers in these schools who would work in and with the community.

These factors which suggested that there was a need for flexibility in the implementation, if not in the design, of school curricula, led directly into discussion of what were appropriate roles of national, provincial and local agencies and schools in both centralized and decentralized systems of education.

3. Implementation

The problems of ensuring effective implementation of curricula developed by national agencies received a considerable amount of attention during the Seminar. In some countries, barriers to effective implementation included a lack of basic educational provision such as buildings, paper, materials, libraries. Generally the ability of teachers to understand the curriculum and its implications for the teaching-learning situations was seen as crucial. Both pre-service and in-service education were seen as important components of the curriculum development and implementation process. The need to involve teachers and teacher educators early in projects so that they had time to become familiar with new ideas was emphasized.

Again there were important differences between countries which limited what could be done. In some countries the current teaching force included many untrained teachers, whereas other consisted of teachers with several years of teacher training. Some countries had a shortage of teachers and little selection of teachers was possible. Others had a surplus of applicants for teacher training and for teaching positions and could afford to be selective and give more weight to the desirable characteristics of their teachers.

The need to raise the professionalism of teachers was recognized, and the part which could be played by giving teachers greater responsibility and autonomy in curriculum matters was discussed. Where teachers had to follow closely prescribed curricula and were given few opportunities to show initiative and be innovative in curriculum matters, this was not necessarily thought to be a good thing.

4. Quality of education

The quality of education and the need to ensure that standards were maintained was an issue of general concern in the seminar and arose specifically following visits to schools in the A.C.T. Participants queried how the quality of education could be ensured in the absence of both external examinations and external supervision of teachers. The evaluation and monitoring roles of national organizations were seen to be essential.

5. Optimum utilization of resources

In some countries the need to make the best use of material resources and personnel arose out of the scarcity of both. The committee method of curriculum development was seen as the most effective and economical way of using scarce specialists. In one country, the shortage of materials and the difficulties of transport in a mountainous terrain led to the idea of developing one integrated textbook for each grade in early primary school. By contrast, in countries with ample resources the major problem was seen to be avoiding unnecessary duplication and waste of resources.

Recommendations

The recommendations were formulated by the small discussion groups, then modified and formally ratified in the final plenary session of the seminar. Because of the sorts of diversity described in the summary, it was not considered that all the recommendations would be applicable to all the APEID countries. Nor are they seen as a comprehensive list of recommendations. Rather they should be viewed as recommendations for action arising out of the particular foci of discussions in the seminar.

The recommendations are grouped under four main headings and are not listed in any order of priority. Indeed given the diversity of approaches to curriculum development, it would be incompatible with the discussions of the seminar to suggest that the same order of priorities for action would be appropriate for all countries.

Curriculum planning and design issues

1. Curriculum should maintain a balance between a) preparing students for living in and improving the local community;and b) preparing students for new life styles resulting from geographical mobility and new situations arising from the impact of outside forces on the local community.
2. Curriculum should be given more of a future orientation within particular historical, cultural and social contexts.
3. It is desirable to have a balance between centralized and decentralized approaches to curriculum development so that responsibilities and roles are distributed between national, local and school levels.
4. The curriculum developers should take account of and, whenever possible, utilize those extra-curricular and extra-school features of the learners' environment which can have an impact on the effectiveness of new curriculum.
5. In materials development and production, greater stress could be placed on improvisation and utilization of low-cost local resources.
6. In the design and development of curriculum, developers should take account of and selectively utilize existing materials.

The role of schools and teachers in curriculum development

7. If schools are given responsibility for their own curriculum, then they should be given the necessary moral, academic, personnel, administrative and financial support to excute their tasks. Administrators have to recognize a) that educational systems have to provide support services and expertise;and b) that a measure of direct (organizational) and indirect (cultural) control are inevitable.
8. It is important for schools, with support from systems, to undertake staff development and in-service activities so that implementation of new programmes can be closely related to the existing school conditions.
9. The key role of the principal in curriculum implementation needs to be recognized and provision made for appropriate in-service training and support.
10. Those teachers who have had experience of curriculum development should be involved in the further education and training of other teachers.

The role of systems and administrative bodies in curriculum development

11. Educators, particularly curriculum developers, should be open to social and community needs and expressions and see themselves as collaborating with the work of other national and international agencies as well as taking note of community issues.

12. Curriculum development centres/groups/agencies should be given the necessary moral, academic, personnel, administrative and financial support to execute their tasks. Also curriculum design, development and dissemination planning should be realistic, taking into consideration available resources, learning needs, societal needs, teacher competency, costs and other relevant factors.

13. The advantages of a team approach to the planning, development and implementation (including in-service training) of curriculum should be recognized. The agents of curriculum change such as teachers, organizers, supervisors, inspectors and other relevant key personnel need to be given the necessary orientation toward better understanding and communication of the curriculum change tc be disseminated.

14. Curriculum development agencies at the national level should have the responsibility of co-ordinating curriculum development work in order to prevent duplication and waste of resources.

15. Formative, process and product evaluation should be built in to the overall curriculum design.

16. When curriculum materials, teachers' guides and manuals are revised, feedback from teachers should be a major input.

17. Expenditure for in-service training and teacher development should be budgeted in the planning stages of a curriculum project.

18. Curriculum development should be a part of all pre-service teacher education programmes,and there should be close linkages between those involved in curriculum development and those involved in pre-service education.

The role of regional and other international agencies in curriculum development

19. International, regional and national agencies should take steps to promote discussion of the curriculum

    . about the future - insofar as it is known;
    . for the future - to prepare students for as yet unforeseen situations;
    . in the future - the sort of curriculum which might be appropriate in the future.

20. Curriculum development and design should take into consideration not only national needs but the need for greater international understanding as well.

21. Unesco/APEID should continue work in promoting international understanding through school curricula with a focus on life-styles, culture and tradition.

22. APEID and other international agencies should promote exchange of personnel, materials and ideas, and conduct (where possible) joint projects between nations.

Annex I

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Malaysia	Ms. Asiah bt. Abu Samah Director Curriculum Development Centre Ministry of Education Pesiran Duta, off Jalan Duta Kuala Lumpur 11-04
Nepal	Mr. Rana B. Thapa Chief, Curriculum Textbooks and Supervision Development Centre Ministry of Education, Lalitpur
Pakistan	Mr. Muhammad Hashim Abbasi Deputy Educational Adviser Ministry of Education, Islamabad
Papua New Guinea	Mr. Gei Ilagi Assistant Secretary Provincial Standards Ministry of Education Science and Culture, Private Mail Bag Boroko
Philippines	Dr. Mona D. Valisno Executive Director National Educational Testing Centre Ministry of Education Arroceros, Manila
Singapore	Mrs. Lee Sow Ling Deputy Director, Special Projects Educational Development Division Ministry of Education Kay Siang Road, Singapore 10
Sri Lanka	Mr. George Mendis Deputy Director-General of Education Colombo
Thailand	Mr. Swat Chongkol Director Curriculum Development Centre Department of Educational Techniques Ministry of Education 928 Sukhumvit Road, Bangkok 11

UNESCO

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Annex II

OFFICERS OF THE SEMINAR

Chairman : Dr. Malcolm Skilbeck (Australia)

Vice-Chairman : Dr. Yung Dug Lee (Republic of Korea)

Rapporteurs : Dr. Shib K. Mitra (India)
Dr. M.C. Pant (Unesco)
Professor Peter J. Fensham (Australia)

Assistant Rapporteurs : Dr. Clare Hughes (Australia)
: Miss Marguerite Wells (Australia)

OFFICERS OF THE GROUPS

Group - A

Chairman : Mr. Rana B. Thapa (Nepal)

Rapporteur : Professor Peter J. Fensham (Australia)

Group - B

Chairman : Dr. Shib K. Mitra (India)

Raporteur : Miss Asiah bt Abu Samah (Malaysia)

Group - C

Chairman : Mr. George Mendis (Sri Lanka)

Rapporteur : Miss Lee Sow Ling (Singapore)

CONFERENCE SUPPORT STAFF

Wendy Edgar; Catharina Koopman; Marge Hall; Beth Moran (CDC)

Marie Gallagher (Unesco National Committee)

Annex III

SCHEDULE OF WORK

Monday 10 September 1979

am/pm Perth - Visit to institutions
Melbourne - Visit to institutions

Tuesday 11 September 1979

am Perth - Visits to institutions
Melbourne - Visits to institutions

Wednesday 12 September 1979

Forenoon - Inauguration
- Presentation and discussion of country papers

Afternoon - Preparation and discussion of country papers

Evening - Steering Committee meeting

Thursday 13 September 1979

Forenoon - Presentation and discussion of country papers (concluded)

Afternoon - Visit to institutions

Friday 14 September 1979

Forenoon - Visit to institutions

Afternoon - Pannel discussion on visits

Evening - Steering Committee

Saturday 15 September 1979

Forenoon - Identification of Themes and their analysis (Group work)

Afternoon - Free

Sunday 16 September 1979

Forenoon/Afternoon - Sightseeing

Annex III - Schedule of work

Monday 17 September 1979

Forenoon - Group work
Afternoon - Group work

Tuesday 18 September 1979

Forenoon - Consideration of preliminary report of groups in plenary
Afternoon - Travel to Sydney

Wednesday 19 September 1979

Forenoon/Afternoon - Visit to institutions

Thursday 20 September 1979

Forenoon - Consideration of draft report of the groups in plenary
- Finalization of group reports
Afternoon - Free for informal discussions
- Meeting of Steering Committee for finalization of the draft report

Friday 21 September 1979

Forenoon - Consideration and adoption of the draft report of the seminar
- Closing session

Annex IV

LIST OF INSTITUTIONS AND SCHOOLS VISITED

1. National Level Institutions

The Schools Commission MLC Tower Woden, A.C.T. 2606	Chairman: Dr. K. McKinnon
Education Research and Development Committee MLC Tower Woden, A.C.T. 2606	Chairman: Mr. S.S. Dunn
Australian Council for Educational Research 9 Frederick Street Hawthorn, Vic. 3122	Director: Dr. J. Keeves
Commonwealth Department of Education MLC Tower Woden, A.C.T. 2606	Secretary: Mr. K. Jones
Curriculum Development Centre Brigalow Street Lyneham, A.C.T. 2602	Director: Dr. M. Skilbeck

2. State Level Institutions

Teachers' Resources Centre NSW Department of Education P.O. Box 43 North Sydney, N.S.W. 2060	Director of Services: Mr. H.K. Carey
Child Migrant Centre NSW Department of Education P.O. Box 33 Sydney, N.S.W. 2001	Officer-in-Charge: Mr. P. Matthews
Curriculum Branch ACT Schools Authority Macarthur House Northbourne Avenue Lyneham, A.C.T. 2602	Director: Dr. J. Grant

2. State Level Institutions (cont'd)

Victorian Department of Education 2 Treasury Place Melbourne, Vic. 3002	Assistant Director-General: Dr. R. Maddocks
Victorian Institute of Secondary Education 582 St. Kilda Road Melbourne, Vic. 3004	Executive Secretary: Mr. P.N. Thwaites
Education Department of Western Australia Parliament Place West Perth, W.A. 6005	Superintendent: Mr. J. Newby
Cahtolic Education Commission of Western Australia P.O. Box 254 Subiaco, W.A. 6008	Chief Education Officer: Dr. R. McSweeney

3. Teacher's Centres

O'Connell Education Stuart Street Griffith, A.C.T. 2603	Acting Director: Mr. M. O'Brien
Inner City Education Centre 37 Cavendish Street Stanmore, N.S.W. 2048	Coordinator: Ms. P. Rossi
Hawthorn Teachers' Centre 80 Collins Street Melbourne, Vic. 3000	Assistant Director of Teacher Education: Mr. P. Creed

4. Colleges of Advanced Education

Kuringai College of Advanced Education P.O. Box 222 Lindfield, N.S.W. 2070	Principal: Mr. G.W. Muir
Canberra College of Advanced Education Belconnen, A.C.T. 2616	Head School of Teacher Education Mr. P. Hughes
Western Australian Institute of Technology Hayman Road South Bentley, W.A. 6102	Acting Director: Dr. Pullman

5. Schools

Marrickville Public School 96 Illawarra Road Marrickville, N.S.W. 2204	Principal: Mr. B. Wilson
Marrickville High School Northcote Street Marrickville, N.S.W. 2204	Principal: Mr. K. Oliver
Cumberland High School 183 Pennant Hills Road Carlingford, N.S.W. 2118	Headmaster: Mr. Beveridge
The Australian International Independent School 110 Talavera Roda North Ryde, N.S.W. 2113	Principal: Mr. W. Eason
The Correspondence School 52-58 William Street Kings Cross, N.S.W. 2011	Principal: Mr. P.J. Gors
Maidstone Primary School Curtin Street Maidstone, Vic. 3012	Principal: Miss Nott
Eltham College P.O. Box 40 Eltham, Vic. 3995	Principal: Mr. D. Davey
Loreto Primary School 69 Webster Street Nedlands, W.A. 6009	Principal: Sr. Margaret O'Sullivan
Girrawheen Senior High School Calvert Way Girrawheen, W.A. 6064	Principal: Mr. J. Monks
Christ the King School 59 Lefroy Road Beaconsfield, W.A. 6162	Principal: Mr. J. McTavish
Forrest Primary School Hobart Avenue Forrest, A.C.T. 2603	Principal: Mr. Twist
Telopea Park High School N.S.W. Crescent Barton, A.C.T. 2600	Principal: Mr. J. Wells
Duffy Primary School Burrinjuck Crescent Duffy, A.C.T. 2611	Principal: Mr. K. Peljo
Dickson College Phillip Avenue Dickson, A.C.T. 2602	Principal Mr. R. Lane

PUBLICATIONS RELATED TO CURRICULUM

Available from Unesco, Bangkok

1. *Teacher education and curriculum for development*
2. *Science in basic functional education: approaches, methods and materials*

*3. *Science in basic functional education: links with real-life situations*

*4. *Curriculum development for work-oriented education (in collaboration with NIER, Tokyo)*

*5. *Co-operation in curriculum exploration*

*6. *Towards strategies of curriculum change*

7. *Lifelong education: the curriculum and basic learning needs*
8. *Integrated approach to curriculum development in primary education in Sri Lanka (in collaboration with IBE)*
9. *Integrated science in the junior secondary school in Sri Lanka (in collaboration with IBE)*
10. *Curriculum for development: analysis and review of processes, products and outcomes*
11. *Pre-vocational education in Sri Lanka (in collaboration with IBE)*
12. *School science education in India*
13. *Implementing curriculum change, a symposium of experiences from the Asian region*
14. *The Curriculum Development Centre of Malaysia*
15. *The National Bureau of Curriculum and Textbooks of Pakistan*
16. *The Institute for the Promotion of Teaching Science and Technology of Thailand*
17. *The Curriculum Development Centre of Sri Lanka*
18. *Strategies and procedures in developing and implementing curriculum*

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* **Available in microfiche**

The *Asian Programme of Educational Innovation for Development (APEID)*, initiated on the recommendation of the Third Regional Conference of Ministers of Education and Those Responsible for Economic Planning in Asia (May–June 1971, Singapore) and the authorization of the General Conference of Unesco at its seventeenth session (Paris, 1972), aims at stimulating and encouraging educational innovations linked to the problems of national development in the Asian region.

All projects and activities within the framework of APEID are designed, developed and implemented co-operatively by the participating Member States through their national centres which have been associated by them for this purpose with APEID.

The 20 countries in Asia and Oceania participating in APEID are: Afghanistan, Australia, Bangladesh, India, Indonesia, Iran, Japan, Lao People's Democratic Republic, Malaysia, Nepal, New Zealand, Pakistan, Papua New Guinea, Philippines, Republic of Korea, Republic of Maldives, Singapore, Socialist Republic of Viet Nam, Sri Lanka and Thailand.

The Asian Centre of Educational Innovation for Development (ACEID) has been established at the Unesco Regional Office for Education in Asia and Oceania in Bangkok to co-ordinate the activities under APEID and to assist the associated national institutions in carrying them out.

The aims of APEID are:

- to stimulate efforts of the Member States to improve the quality of life of the people through creating and strengthening national capabilities for the development and implementation of innovations in education, both formal and non-formal;
- to encourage the Member States to make all groups (students, teachers, parents, village and community leaders, administrative personnel and policy makers) aware of the need for relevant changes in education (both formal and non-formal) as an essential pre-requisite for the improvement of the quality of life of the people;
- to promote understanding and appreciation of the differences in educational practices and approaches of the Member States, and thereby contribute to international understanding and the creation of a new international economic order.